



United States Department of the Interior



FISH AND WILDLIFE SERVICE

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In Reply Refer To:
FWS/Region 5/ES-TE

Memorandum

To: Assistant Regional Director, Ecological Services

From: Lowell Whitney, Regional Habitat Conservation Plan Coordinator, Ecological Services

Subject: Findings and Recommendation on Issuance of an Incidental Take Permit to the Maine Department of Inland Fisheries and Wildlife

Pursuant to section 10(a)(1)(B) of the Endangered Species Act of 1973, as amended (16 U.S.C. Section 1531 et seq.) (ESA), the U. S. Fish and Wildlife Service (Service) proposes to issue an incidental take permit to the Maine Department of Inland Fisheries and Wildlife (MDIFW) for incidental take¹ of the federally listed (threatened) Canada lynx. In support of its application, the MDIFW developed an Incidental Take Plan for Maine's Trapping Program (final ITP). Note that the MDIFW refers to its conservation plan as an ITP, rather than a habitat conservation plan, but that it serves the same purpose and includes the same required elements. The Service finds that the MDIFW's application for an incidental take permit meets the issuance criteria outlined in section 10(a)(2)(B) of the ESA and in 50 CFR 17.22(b)(2) as explained by the following analysis and rationale. The resulting permit will authorize the incidental take of up to 195 lynx over a 15-year permit term. This includes up to 183 lynx that may be incidentally captured and released with no or only minor injuries, up to 9 lynx that may be incidentally captured and released after treatment for more severe injuries, and up to 3 lynx that may be captured and either be killed or be nonreleasable due to the severity of capture-related injuries.

While the amount of take requested for permit authorization by this ITP appears to be large, most lynx incidentally trapped as the result of this plan will be released with no or only minor injuries that will not affect their ability to function normally in the environment. Due to avoidance and minimization measures in the ITP, only 12 lynx over the permit period (i.e., less than 1 per year) are anticipated to have more severe injuries that require additional treatment. Of those, we anticipate that most will be treated, released, and able to function normally in their environment. Only three lynx are anticipated to have severe injuries such that they cannot be released into the wild or are killed. The impact of a loss of 3 lynx over a 15-year period from a statewide population that is currently more than 500 is small (less than an average of 0.04 percent of the population on an annual basis). It is that level of impact that provides the context for the Service's evaluation of the MDIFW's ITP application.

Documents used in the preparation of these findings and recommendations include, but are not limited to: the MDIFW's 2014 final ITP (MDIFW 2014)², the Service's revised draft EA (USFWS 2014a), the

¹ Take is defined in section 3 of the ESA as, to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

² The MDIFW submitted a number of drafts of the ITP, with substantially revised versions on August 13, 2008,

Service's Findings of No Significant Impact and final EA (USFWS 2014b), the Service's section 7 biological opinion (USFWS 2014c), and responses to public comments included in the draft and final EAs. These documents are incorporated into this findings and recommendations document by reference. This findings and recommendations document provides the Service's rationale for issuing an incidental take permit and in doing so summarizes key aspects of the proposed project and its impacts. The final ITP provides the MDIFW's final plan, including full project description and commitments for minimization, mitigation, monitoring, addressing uncertainty, and funding. In addition, the MDIFW's final ITP includes several appendices that address key components of its plan, including a memorandum of understanding between the MDIFW and the Maine Bureau of Parks and Land (MBPL) pertaining to implementation of the mitigation. The final EA and biological opinion provide the Service's analyses of the environmental effects and the effects from the project on listed species, including the Canada lynx.

In preparing these findings and recommendations, the Service recognizes that this project is particularly complex due to the overarching public discourse on the role of trapping as a wildlife management tool and a publically acceptable recreational pursuit. This national debate extends beyond trapping in Maine, or the detail addressed by the MDIFW's ITP, but is ultimately played out at state and local levels. The Service does not weigh in on the merits of the activity requested for permit coverage. The ESA explains that the Secretary of the Interior shall issue a permit if the conservation plan meets the permit issuance criteria and there are adequate assurances the plan will be implemented.

I. Program Description

The MDIFW's incidental take application requests a 15-year authorization for statewide coverage of all aspects of incidental take of Canada lynx associated with Maine's recreational fur trapping, predator management (PM), and animal damage control (ADC) programs. The MDIFW's trapping programs occur statewide. The upland fur trapping program is from mid-October through December, the PM program is from mid-October to mid-December, and the ADC program is year round. The MDIFW's trapping programs are described in detail in the final ITP (section 3.1) and final EA (section 1.3).

Maine's recreational fur trapping program is intended to provide recreational opportunity for trappers and to manage some furbearer species using common wildlife management principles. Fur trapping activities occur throughout the state, but most often occur in areas closer to human population centers, which correspond to areas of the state outside of where lynx populations occur (final EA, appendix 3, figure 3). Annually approximately 6,000 individuals have furbearer trapping licenses or are otherwise authorized to trap. However, we recognize that this overestimates the number of individuals that are actually trapping each year. For example, this includes over 3,300 individuals with lifetime trapping permits that may not regularly engage in trapping despite having a license that would permit them to do so. In addition, not all of these individuals participate in the type of trapping where incidental capture of lynx is anticipated to be an issue. The MDIFW's best estimate of the number of trappers that annually trap in lynx WMDs for species where incidental capture of lynx may occur (i.e., marten, fisher, coyotes, bobcat, and fox) is 529. This includes about 329 trappers that set killer-type traps for marten and fisher and 305 trappers that set foothold traps for coyote, fox, and bobcats.

The PM program uses paid trappers to trap coyotes in or near deer wintering areas, which often are in areas of the state where lynx also occur (final EA, appendix 3, figure 4). The ADC program addresses

March, 2013, and July 29, 2013. The July 29, 2013 version included new trapping programs (i.e., predator management and animal damage control), new forms of trapping (e.g., cable restraints, cage traps), and changes to its trapping program (e.g., rescission of the 2007 consent decree to allow unlimited foothold trap size). The July 29, 2013 version represents the precursor to the MDIFW's October 2014 final ITP and was the basis for the Service's recent August, 2014 draft EA. Appendix 1 contains a project chronology.

animal damage throughout the state. The ADC activities in the areas where lynx occur are often focused on problem beavers, but could be expanded to include coyote control in the future. Currently, about 27 trappers participate in the PM program and about 85 trappers are authorized to conduct ADC trapping to remove nuisance animals.

These programs all incorporate various trapping methods for capturing target wildlife species (such as red fox, eastern coyote, bobcat, fisher, and American marten). Trapping is somewhat indiscriminate in that nontarget wildlife (such as lynx) is sometimes captured incidentally by traps set for target species. There are two fundamental trapping techniques (and numerous trap and set types within each) employed to capture target species—nonlethal and lethal. Nonlethal trapping techniques (e.g., cage traps, foothold traps, cable restraints) are intended to capture and hold the target animal until the trapper can either release or dispatch the captured animal. These techniques are specifically designed to capture animals with as little trauma as possible. Nonlethal trapping techniques are sometimes more generally referred to as restraining traps throughout documents related to this project. Lethal capture techniques (e.g., conibear traps, rat traps) are intended to directly kill the target animal. Lethal capture techniques are sometimes more generally referred to as killer-type traps throughout documents related to this project. The MDIFW's ITP addresses the potential for incidental capture of lynx through both trapping techniques, as they have different consequences for the captured wildlife.

The MDIFW applied for an incidental take permit in response to a court-approved settlement agreement between the State and several plaintiffs concerning the effects of trapping on Canada lynx. Under terms of a 2007 consent decree, the MDIFW agreed to a number of measures to address take of lynx. Several of these measures, including requiring killer-type traps in lynx areas be placed on elevated leaning poles, restricting use of exposed bait, and limiting the size of foothold traps, were incorporated into trapping regulations that have been in place since 2008. Information collected since that time has helped the MDIFW understand which consent decree measures have been effective for avoiding lynx capture and injury. Upon receiving an incidental take permit, the MDIFW will request the court to vacate the consent decree and intends to rescind the measures that have not proven effective (e.g., restrictions on the size of foothold traps, restrictions on the use of cage traps in northern Maine). The MDIFW has incorporated other provisions of the consent decree that have been effective (e.g., regulations concerning exposed bait, requiring use of leaning poles for killer-type traps, and requiring exclusion boxes for killer type traps set on the ground) into its ITP and thus those measures will remain in place with issuance of an incidental take permit. In addition, the ITP incorporates a number of additional measures to address the incidental capture of lynx and in some cases includes new trapping techniques (e.g., nonlethal cable restraints).

The purpose of a conservation plan associated with an ESA section 10 incidental take permit is to minimize and mitigate the impacts of take from covered activities to the maximum extent practicable. In some respects the MDIFW's ITP is similar to how the agency has been addressing incidental capture of lynx under its existing furbearer trapping program. That is due to the fact that many of the strategies in the 2007 consent decree have proven effective for avoiding lynx capture and injury, and those elements are core measures in the ITP. There are few other ways (except to limit trapping in lynx areas) to reduce the number of lynx incidentally captured through trapping. Therefore, most of the additional ITP measures are intended to improve how injuries are evaluated and managed, increase compliance with trapper regulations, and establish contingencies to address potential uncertainties regarding critical assumptions. The primary impact of take that the ITP is addressing is the injury or fatalities of lynx captured incidentally in traps. When trapping is conducted consistent with the regulations that the MDIFW currently has in place and those that will be implemented for the ITP, incidental capture and release of lynx is not anticipated to negatively affect individual lynx or their populations. The ITP also incorporates habitat-based mitigation that is intended to compensate for the lethal take anticipated in the plan (i.e., up to three lynx over the 15-year permit period), and thus more than offsets the impacts of the take (i.e., loss of three lynx over a 15-year permit period from a lynx population that is currently at least

500 individuals in Maine—an average of 0.04 percent of the population annually). The MDIFW’s ITP provides the basis for take authorization via a Service-issued incidental take permit, pursuant to the ESA.

Project Location; Covered Individuals; Covered Activities; Permit Term

The MDIFW has requested an incidental take permit that provides coverage for any licensed or other authorized trapper who incidentally traps a lynx in the state of Maine. Although lynx occur primarily in western, northern, and eastern Maine, they occasionally disperse outside of this area and could be incidentally trapped. The ITP’s avoidance and minimization measures are focused on the areas of the state where lynx regularly occur, since these are the areas where lynx would have greater chances of encountering traps. These areas currently include the MDIFW’s wildlife management districts (WMDs) 1 to 11, 14, 18, and 19 (final ITP, figure 1.1). The ITP incorporates a changed circumstances provision that establishes protocols for adding additional WMDs if lynx populations expand into additional areas of the state, or to remove WMDs in the event lynx populations no longer occur in some areas. Therefore, the ITP is intended to provide statewide coverage, but is focused on the areas where lynx populations occur.

The MDIFW has requested coverage for any licensed or other authorized trapper in Maine. These entities include all licensed trappers (nonresident, resident, alien, junior (resident and nonresident), apprentice resident and nonresident trappers, complimentary over-70 trappers, individuals holding lifetime trapping licenses including Native Americans that trap off tribal lands, ADC agents, and PM trappers. Covered entities also include other people authorized to trap without trapping licenses such as MDIFW full-time employees (e.g., district game wardens, and wildlife biologists) and landowners trapping on their own lands. All covered entities would receive incidental take coverage through this incidental take permit according to limitations prescribed in the final ITP and the incidental take permit.

The MDIFW has requested permit coverage for all activities associated with Maine’s recreational fur trapping³, PM, and ADC programs that result in incidental take of Canada lynx. As detailed in the ITP, these activities involve the setting of traps and handling of lynx that may be incidentally captured as nontarget species in legally set traps (final ITP sections 1.4, 3.3). Incidental take of lynx in illegally set traps is not covered⁴.

The MDIFW has requested permit coverage for a 15-year period to coincide with its 15-year species planning process (final ITP, section 1.2). Approximately every 15 years, the MDIFW reviews the status of wildlife species to identify species management goals and objectives from public input. A Canada Lynx Assessment (Vashon et al. 2012) was completed by the MDIFW in 2012; however, publicly derived goals and objectives have not been developed yet.

Summary of the ITP Conservation Strategy

The conservation strategy incorporated into the ITP is aimed at avoiding the incidental capture of lynx in killer-type traps and minimizing the potential for injury from nonlethal type trapping techniques. Nonlethal trapping techniques (e.g., foothold traps, cable restraints, cage traps) are generally nonselective, meaning that they catch a variety of target and nontarget species. Therefore, the strategy does not incorporate measures specifically aimed at reducing the capture rate from nonlethal trapping techniques.

³ Trapping for bears is a legal activity in Maine but not a covered activity in the ITP because it falls under the hunting, rather than the trapping regulations. In addition, lynx are not known to be incidentally captured in traps set for bears.

⁴ The final ITP, section 3.3, describes an annual process to determine which takings apply to the incidental take quota and which do not. If the violation of rule or law contributed to the capture of the lynx, the capture will not count toward the MDIFW’s permitted take.

However, these trapping techniques also generally do not result in injury or fatality of captured animals; rather nontarget animals are generally released with no or only minor injury. Thus, the strategy incorporated into the ITP for nonlethal type trapping techniques is aimed at ensuring that incidentally captured lynx are properly evaluated and released without injuries, thereby minimizing the impacts (i.e., injury or death) of the capture events. The ITP incorporates existing regulations that have proven successful in reducing captures or injuries and includes additional regulations and/or changes in MDIFW's trapping program to increase the effectiveness of the conservation strategy. The strategy incorporates monitoring to ensure effectiveness of the avoidance and minimization measures and contingency measures through changed circumstances in the event that some measures are not effective. Finally, the MDIFW has developed a mitigation plan to maintain and enhance sufficient high quality foraging habitat to support lynx that would otherwise be lost from Maine's population; the plan is intended to compensate for the loss of three lynx which is more than commensurate with the impact of the lethal take anticipated by the ITP (i.e., loss of an average of 0.04 percent of the population annually).

We note that the MDIFW made a number of changes to its final ITP based on public and Service comments on the July 2013 draft ITP (MDIFW 2013). For example, the MDIFW increased the acreage commitment for the mitigation to be in line with Service recommendations, clarified details regarding the changed circumstances, and made a number of other clarifications throughout the final ITP. These changes do not result in different effects than were analyzed in the Service's August 2014 DEA (USFWS 2014a). However, the changes improve the clarity of the conservation commitments.

Avoidance and Minimization: Section 5 of the final ITP describes the full suite of avoidance and minimization measures. Such measures are summarized in table 5.2.2 of the final ITP and include:

- Exclude lynx from killer-type traps by requiring that these traps be placed on leaning poles of specific dimensions or in exclusion boxes (if set on the ground, except for blind sets which can be set without bait or lure),
- Require mandatory reporting of any incidental lynx capture,
- Prohibit the use of exposed bait,
- Require the use of one swivel on foothold trap chains,
- Maintain a hotline for trappers to call if a lynx is caught,
- Have trained MDIFW staff respond to each incidental capture of lynx to release or assist in the release of the animal, to assess the animal for injuries, to treat injuries, and to transport the animal if veterinary care is warranted,
- Develop and implement a field-based injury scoring system, in consultation with a veterinarian,
- Maintain a list of veterinarians to rehabilitate injured lynx, train the MDIFW biologists, and conduct field visits,
- Rehabilitate lynx prior to releasing them, and radio-collar lynx to determine whether the treated injuries contributed to the mortality of the animals after release,
- Capture and radio-collar or hold kittens in captivity until their mother can be released, in the event that a mother with kittens is severely injured in a trap and must be rehabilitated,
- Educate trappers on ways to avoid and reduce injuries to lynx by preparing and distributing outreach materials, including a Web site, booklet, and video. Include lynx minimization training in trapper training,
- Conduct expanded trapper compliance monitoring by MDIFW wardens to ensure trappers are following relevant trapping regulations, and
- Implement a phased-in approach for nonlethal cable restraints once it has been demonstrated they will result in similar or reduced injury to captured animals.

Mitigation: Section 5 of the final ITP describes the mitigation plan, which is intended to compensate for up to three lynx that may be captured and either be nonreleasable due to the severity of capture related injuries or be killed over the 15-year permit term. Mitigation commitments are to create and/or maintain 6,200 acres of high quality hare habitat (HQHH) on a 22,045-acre area on the Seboomook Unit through an agreement with MBPL (final ITP appendix 11a) by the end of the 15-year permit. Within three years of issuing the final permit, MBPL will complete a forest management plan for lynx. The plan will (a) document the baseline status of HQHH, (b) use forestry models to document the amount of HQHH under MBPL's current forest management regime and identify opportunities for mitigation, (c) describe and model mitigation forestry to provide additional HQHH commensurate with the anticipated take, and (d) describe harvest schedules and anticipated HQHH for 5-year increments.

The forest management plan developed by the MBPL will be reviewed by the Service prior to implementation. The Service believes MDIFW will demonstrate effectiveness in providing the mitigation requirement (i.e., a net increase of 3 lynx as indicated through the creation, maintenance or enhancement of 6,200 acres of HQHH) through the monitoring committed to in the ITP. This monitoring includes MBPL annually providing MDIFW an update on forest management activities in the mitigation area, and every 5 years (i.e., 3 times over the course of the permit) providing an estimate of the HQHH on the mitigation area. Also, monitoring in the HQHH will entail, for each of the first 5 years and every 5 years thereafter, winter snow track surveys to monitor lynx presence and numbers, and for the first 5 years alone, surveys to estimate hare densities in the mitigation area. These surveys will set a baseline for future assessment of how the mitigation area is performing in supporting lynx.

Changed Circumstances: Section 5.4 of the final ITP describes changed circumstances that, if triggered, will result in changes to the conservation plan. The monitoring commitments, specific triggers, and responses to the triggers are described for each changed circumstance. The following changed circumstances are addressed in the plan:

- 1) Lynx are being caught in traps at a higher rate than expected. The MDIFW will monitor incidental take by trappers reporting lynx caught in traps. Regulations require trappers to report incidental take of lynx, and the MDIFW believes most incidentally trapped lynx are reported. If more than 13 lynx are incidentally captured on average per year in legal traps over a rolling 5-year period, the MDIFW in consultation with the Service will implement additional minimization measures to reduce capture rates of lynx prior to the trapping season that follows the trigger being tripped. The final ITP provides additional details and rationale.
- 2) Lynx are being severely injured in traps at a higher rate than expected. The MDIFW's goal is for biological staff to respond to at least 90 percent of lynx captured in traps to evaluate, treat, and release lynx. Biologists will be trained by a veterinarian to detect and record injuries. If more than three lynx in 5 years have severe injuries, the MDIFW in consultation with the Service will implement additional minimization measures to reduce lynx injury rates prior to the trapping season that follows the trigger being tripped. The final ITP provides additional details and rationale.
- 3) Lynx are being killed in traps at a higher rate than expected. The MDIFW will closely monitor and track incidences of lynx injuries and fatalities in traps. If a lynx is killed in a legally set trap (or cannot be released after treatment of a severe injury) and an aspect of the trap type or trap set can be corrected and implemented more broadly with a practicable solution by other trappers to prevent additional incidences, the MDIFW will address the problem through regulatory changes and/or outreach to trappers prior to the trapping season following the trigger being tripped. If a second lynx is killed in a legally set trap (or cannot be released after treatment of a severe injury), the MDIFW will immediately implement regulatory measures to

- prevent further lynx fatalities (e.g., require the use of exclusion devices on all killer-type traps, or equally effective measure). The final ITP provides additional details and rationale.
- 4) There is new information on lynx or trapping or technological advances in trap design or monitoring. The MDIFW will monitor trapping literature for new information on Canada lynx and trapping (e.g., new exclusion devices), new methods for monitoring, and technological advances to further avoid take of lynx from trapping. The MDIFW in consultation with the Service may use these new methods and will ensure they are compatible with the biological goals and objectives of the final ITP. Any new method, information, or technology will only be considered if it has been demonstrated in an acceptable scientific study and will not require an increase in the take authorization for the plan.
 - 5) Trapper compliance with elevated killer-type trap regulations is less than 90 percent. The MDIFW's Warden Service will conduct compliance monitoring for killer-type traps. Wardens will check at least 80 of 396 trappers (20 percent) setting killer-type traps in lynx WMDs (final ITP, section 5.2.1, PI 5) to determine (a) the proportion of traps that are in compliance, (b) the proportion of trappers checked that have traps out of compliance, (c) the frequency and type of infractions, and (d) the outcomes (number of trappers given a warning or a summons). If less than 90 percent of the trappers are out of compliance with regulations developed to minimize take of lynx, MDIFW will begin to implement a process to more aggressively increase trapper compliance, as explained in the changed circumstance.
 - 6) Mitigation acreage is not achieved. There are several different circumstances that could lead to the mitigation not being achieved. If that is the case, the MDIFW will work with MBPL to either increase the size of the mitigation area (currently 22,046 acres) to achieve the mitigation acreage or extend the MOU period beyond 2029.
 - 7) The lynx population declines, but the rate of incidental take of lynx remains the same. If there is a catastrophic decline in the number of lynx in Maine (e.g., below 100 lynx), the MDIFW expects the level of incidental take to decline. If lynx take does not decline, the MDIFW will consult with the Service to discuss additional minimization measures that may be necessary to avoid take.

Monitoring and Reporting: Section 5.2.1 of the final ITP includes descriptions of the effectiveness and compliance monitoring and reporting commitments for each minimization measure. The following monitoring commitments are included in the plan:

- Investigate, document, and evaluate the circumstance and severity of injury of each incident lynx capture.
- Document the number of lynx caught in traps and reported by trappers.
- Analyze annual reporting data to determine whether 90 percent or more of trappers call the hotline prior to releasing a lynx.
- Maintain a database of incidental lynx captures that are reported to evaluate whether trappers have been compliant with mandatory reporting requirements and report annually to the Service.
- Monitor compliance with trapping laws when investigating reported incidental lynx captures to ensure compliance with trapping laws.
- Notify the Service when trapping related regulations go into effect (e.g., the restriction on foothold trap size is rescinded).
- Report to the Service any activities involving orphaned kittens including the number, response, and outcome.
- Report to the Service meetings with the Maine Trapper's Association and other significant interactions with Maine trappers; provide copies of the annual trapper regulations booklet, trapper information booklet, and any revisions to the "How to Avoid the Incidental Take of

Lynx” booklet; and report any changes to the MDIFW’s lynx and trapping Web site, updates to trapper education courses concerning lynx, when the video is distributed, and training sessions and communication with trapper education instructors.

- Monitor and report annually on compliance with killer-type trap regulations in lynx WMDs. The MDIFW will summarize and report trapping compliance data annually to include such items as how many illegal sets, how many instances of non-reporting, what type of non-compliance, different categories (warnings, summons, etc.) and frequencies.
- Monitor and summarize trapper effort data from voluntary trapper surveys and generated from license numbers and furbearer harvest data in annual reports.
- Monitor and annually report incidental take of migratory birds in traps.
- Notify the Service when key implementation tasks are completed, including:
 - Injury scoring system for live animals has been developed,
 - Staff training occurs with a veterinarian and when veterinarians accompany biologists on lynx captures,
 - Any changes in lynx WMDs where trapping restrictions apply, and
 - Any reported lynx captures.

Compliance and effectiveness monitoring for the mitigation in the final ITP (section 5.3) will include the following:

- The MDIFW will ensure that lynx monitoring (winter snow track surveys) takes place for 5 consecutive years and every 5 years thereafter to estimate the number of lynx present on the mitigation area.
- For the first 5 years and every 5 years thereafter, the MDIFW will ensure winter snow track surveys are conducted to monitor whether lynx are present and estimate the number of lynx on the Habitat Management Area (HMA). For the first 5 years, the MDIFW will ensure surveys are conducted to estimate hare densities in the HMA (e.g., participation in Continental Hare Survey)⁵.
- The MBPL will annually provide an update to MDIFW on the forest management activities conducted on the HMA and every 5 years provide an estimate of HQHH on the HMA.
- The MBPL will complete compartment exams (i.e., timber cruises) to update forest maps and management plans every 15 years. This inventory will be used by the MDIFW to calculate the acreage of HQHH on the HMA at the end of the permit period to ensure the mitigation objectives are achieved.

In most instances, the MDIFW will provide all monitoring results described above in an annual report to the Service. Reports of lynx caught in traps will be immediately provided to the Service.

II. Incidental Take Permit Issuance Criteria – Analysis and Findings

A. Permit Issuance Criteria

Section 10(a)(2) of the ESA specifies the requirements for permit issuance. This provision is broken into two component parts, one directed to applicants and the other to the Service. Section 10(a)(2)(A) sets forth the required components of an application from which the Service can judge whether an applicant’s submission is complete. Section 10(a)(2)(B) provides the criteria by which the Service must evaluate and

⁵ The MBPL and the MDIFW will participate in a North American snowshoe hare survey, which is being conducted by Dr. Dennis Murray, Trent University, Peterborough, Ontario, Canada. A permanent hare pellet plot was established on the Seboomook Unit in the summer of 2014.

approve an application package once it has determined the submission is complete. As described below, the requirements, although necessarily similar, are not identical, and are not interchangeable standards.

Section 10(a)(2)(A) of the ESA specifically mandates that “no permit may be issued by the Secretary authorizing any taking referred to in paragraph (1)(B) unless the applicant submits to the Secretary a conservation plan that specifies: (i) the impact which will likely result from such taking; (ii) what steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps; (iii) what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and (iv) such other measures as the Secretary may require as being necessary or appropriate for the purposes of the plan.”

Section 10(a)(2)(B) of the ESA mandates that the Secretary shall issue a permit, “if the Secretary finds, after opportunity for public comment, with respect to a permit application and the related conservation plan that: (i) the taking will be incidental; (ii) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (iii) the applicant will assure that adequate funding for the plan will be provided; (iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (v) the measures, if any, required under subparagraph (A)(iv) will be met; and he has received such other assurances as he may require that the plan will be implemented.”

The Service’s implementing regulations (50 CFR 17.22(b)(1) and 50 C.F.R. 17.32(b)(1)) are very similar to the ESA’s statutory requirements for issuance of incidental take permits, but also require conservation plans to include monitoring measures and procedures to address unforeseen circumstances.

B. Anticipated Take

The issuance criteria of ESA section 10(a)(2)(B) focuses largely on the take that is anticipated to occur as a result of the proposed covered activities and the obligations of the MDIFW, as the permittee, to reduce or compensate for the impact of the taking. To provide context for that discussion, we summarize what is known about Canada lynx occurrence in Maine in relation to their potential exposure to trapping activities. We also describe the take anticipated after accounting for the MDIFW’s avoidance and minimization strategy⁶.

Canada Lynx Exposure to Trapping Activities

Canada lynx have a well-established resident population in Maine that is estimated to have a minimum of 500 individuals⁷. Lynx follow a classic predator-prey population dynamics model with boom and bust population cycles that influence both their population levels and geographic distributions on the landscape (Ward and Krebs 1985, Slough and Mowat, 1996, O’Donoghue et al. 2001). Presently, the lynx population in Maine is near the top of the cycle and is anticipated to decline over the next decade (Fuller and Harrison 2005, Scott 2009, McWilliams et al 2005, Hoving et al. 2004, Vashon et al. 2012), though we cannot estimate the population level or distribution at the bottom of the cycle. The lynx population

⁶ In the BO, we determined that several other components of the trapping programs will have insignificant effects to lynx in the action area. These components include trapper use of snowmobiles and driving on forest roads.

⁷ For the purposes of this findings document and the BO, we estimate a minimum population of 500 adult lynx in Maine. The actual population size may well be higher. By utilizing two different methods, the MDIFW estimated there were between 750 and 1,000 adult lynx in northern Maine in 2006 (final ITP p. 22; Vashon et al. 2012, appendix IV) about the time when the MDIFW believed that lynx populations peaked (final ITP p. 64). Simons (2009) used a lynx habitat model and calculated the summed probability of lynx occurrence using a fixed, non-overlapping home range-sized grid to estimate a population of approximately 236 to 355 adult lynx on a 3.56 million-acre study area (160 townships) that constituted about half of the 6.8 million-acre lynx critical habitat. Both methods have shortcomings, but indicate that northern Maine supports a population of more than 500 adult lynx.

occurs primarily in western, northern, and eastern Maine, though individual lynx occasionally disperse or make temporary, but long-distance movements outside of these areas (Vashon et al. 2012, final EA, figure 4.2.1). Lynx are known to regularly occur in WMDs 1 to 11, 14, 18, and 19 (final ITP section 2.2.1, final EA section 4.2.1).

While the MDIFW trapping programs occur statewide, there is generally less trapping effort in more remote parts of the state (final ITP appendix 3). However, it is in these areas where trapping activities overlap with the known lynx population distribution in Maine, and this is where incidental capture of lynx can occur. From 1999 to 2013, 84 lynx were reported to the MDIFW as incidental captures (final ITP table 4.1.3 and 2013 trapping season data). Seventy-seven lynx were captured in the recreational fur trapping program and 7 in the PM program (final ITP section 3). The incidental capture of lynx is generally expected to occur during Maine's general furbearer season (mid-October to the end of December) (final ITP section 3). Trapping for some aquatic species (e.g., beaver, muskrat) can extend to the end of April, and ADC trappers can trap year round. Therefore, lynx can be exposed to trapping outside of the furbearer season; though we anticipate the risk of incidental capture will be much less. The MDIFW has no reports of incidental lynx captures outside of the furbearer season (final ITP section 3). The MDIFW is requesting year-round and statewide incidental take coverage in the event lynx are captured through any of the trapping programs anywhere in the state.

Anticipated Take from Trapping Activities

Section 9 of the ESA defines take as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. Harm is further defined by the Service to include significant modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering. Therefore, the type of take that is anticipated through the covered activities in the ITP is limited to wounding, killing, trapping, capture, or collecting of lynx. Mitigation activities will result in habitat modifications that improve foraging habitat for lynx, and the short-term effects of the forest management are not anticipated to impair essential behavioral patterns for lynx that may use that area. Therefore, no harm is anticipated through the ITP covered activities. In addition, trapping-related activities do not harass lynx or other species in the sense that they do not result in annoyance of the species beyond the capture event itself. There is some potential for lynx to have short-term temporary disturbance by trappers' use of forest roads and trails when accessing traps. However, these activities will be diffuse relative to the large home ranges within which lynx occur, and disturbance will not rise to the level that significantly disrupts normal behavioral patterns.

The MDIFW anticipates that up to 195 lynx (i.e., 13 lynx per year) may be incidentally captured in legally set traps (final ITP section 4) through all of the furbearer trapping activities (i.e., recreational fur trapping, PM, and ADC programs). This take request is based on the maximum reported take of 11 lynx in 2004 (final ITP table 4.1.4) with an additional 20 percent allowance (i.e., 2 lynx per year) for potential changes in trapping effort, take from new trapping techniques (e.g., cable restraints, cage traps), changing susceptibility of lynx to traps, and unreported lynx captures (final ITP table 4.2.1). While all capture events are considered take, most will result in animals being released with no or only minor injuries. The capture events will generally all occur from nonlethal trapping techniques (e.g., foothold, cable restraints, cage traps), since ITP avoidance measures (e.g., leaning poles and exclusion boxes on ground sets) should be effective at excluding lynx from killer-type traps⁸. Based on its evaluation of previously trapped lynx,

⁸ As explained in section 1.3 of the final EA, seven lynx are reported to have been captured in killer-type traps based on data collected from 1999 to 2013, and five of the seven lynx were killed. However, none of the killer-type traps

the MDIFW expects that up to 183 lynx (84 percent) may have minor injuries, up to 9 lynx (4.4 percent) may have severe injuries requiring veterinary care, and up to 3 lynx (1.6 percent) will be killed or nonreleasable due to the severity of capture-related injuries.

There are several potential alternative methods to independently estimate incidental capture of lynx from trapping activities. These include extrapolating the rate of capture by PM trappers to fur trappers, applying the MDIFW's lynx capture rates in foothold traps from the MDIFW telemetry study to PM and fur trappers, and applying the MDIFW's data on the number of lynx trapped per coyote trapped by PM and fur trappers. Each of these methods involves assumptions and has limitations, whereas the incidental take estimates in the ITP are based on data of annually reported incidental lynx captures. For example, applying the PM rate to fur trappers may not be accurate because it assumes that both groups of trappers have similar effort (i.e., a similar number of trap nights per trapper). Using MDIFW's capture rates for lynx in foothold traps to fur trappers may not be accurate because the MDIFW focused specifically on catching lynx, whereas fur trappers are not targeting them. Applying the MDIFW's data on the number of lynx trapped per coyote trapped may not be accurate because MDIFW calculated these rates using only 2011 data. These alternative approaches are also described in the final EA (section 5.3.1.1). None of the alternative approaches appear to provide more reliable estimates of incidental capture rates than the approach provided in the ITP. Therefore, the Service finds that the MDIFW's take estimate in the ITP is reasonable for the purpose of estimating anticipated take for this incidental take permit.

The MDIFW's take estimates are based on the assumptions that no lynx will be killed in killer-type traps and that most lynx trapped in foothold traps are released with no or only mild injuries (final ITP section 4.1). The MDIFW provided data to show that injury scores of Maine lynx caught by fur trappers and examined externally were similar to injury scores observed for coyotes and bobcats caught during BMP trap testing (final ITP section 7.3). The MDIFW examined 32 lynx caught in foothold traps by fur and PM trappers from 1999 to 2012, and determined that 19 percent had no visible injuries, 75 percent had mild injuries, and 6 percent had moderately severe to severe injuries (final ITP table 4.2.2). We provide an independent evaluation of the anticipated capture-related injuries and a summary of other available data in the final EA (section 5.3.1.1). None of these data are necessarily more appropriate or more reliable than the data presented in the ITP due to differences in injury assessment protocols. Therefore, we assume that the injury rates presented by the MDIFW reflect what will occur throughout ITP implementation, and the Service finds that the MDIFW's data are reasonable for the purpose of estimating anticipated take for this incidental take permit.

In the event that the reported take (i.e., number of lynx reported captured, percentage experiencing severe injuries, or number of fatalities) is greater than what the MDIFW estimated, the MDIFW has incorporated changed circumstances that allows modifications of the plan (final ITP section 5.4). In no event can the level of take exceed what is authorized in the incidental take permit without amendments to the plan and the permit.

In summary, the Service independently evaluated alternative methods, datasets, and assumptions for estimating Canada lynx take. The MDIFW is requesting incidental take authorization for the incidental capture of up to 195 lynx over a 15-year permit term. This includes up to 183 lynx that may be incidentally captured and released with no or only minor injuries, up to 9 lynx that may be incidentally captured and released after treatment for more severe injuries, and up to 3 lynx that may be captured and either be killed or be nonreleasable due to the severity of capture-related injuries. The Service believes

that killed lynx would be legal under current trapping regulations, and the other capture events were from trap sets that were determined by the MDIFW to be illegal at that time. The avoidance measures for killer-type traps were put into place in the 2007/2008 season, and since that time the MDIFW has no reports of lynx captured in legally set killer-type traps.

these reflect a reasonable estimate of take for the project. It is against these estimates that we evaluate the impacts of the taking, in the context of the permit issuance criteria.

C. Findings

1. The taking will be incidental

Incidental take is defined in 50 CFR 17.3 as “any taking otherwise prohibited, if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.” The first part of the definition addresses whether take of lynx is the purpose of activities in the ITP. As discussed above, the purpose of the activities for which the MDIFW is seeking permit coverage is trapping of target furbearer species over a 15-year period through the recreational fur trapping program, as well as the PM and ADC programs. In the course of implementing these trapping programs, the MDIFW anticipates incidental and unavoidable take of lynx. For that reason, the MDIFW developed the ITP, which describes avoidance, minimization, and mitigation measures the agency will implement to address potential effects. Thus, take of listed species is not the purpose of the furbearer trapping programs and will be only incidental to the MDIFW’s efforts to implement the covered activities.

The second part of the definition addresses whether the MDIFW is conducting otherwise lawful activities. Furbearer trapping is a lawful activity in Maine and is regulated by the MDIFW through a variety of trapping-related laws, license requirements, and other program requirements (final ITP appendix 2). In addition, while it is not necessary for the Service to demonstrate that the MDIFW has complied with all other laws prior to issuance of an incidental take permit, we do as a standard practice include a permit term and condition on every incidental take permit issued that says: “The validity of this permit is conditioned upon strict observance of all applicable foreign, State, local, tribal, or other Federal law.”

During the course of developing the ITP, the Service and the MDIFW discussed the risk of take of eagles during trapping activities, the availability of Bald and Golden Eagle Protection Act (BGEPA) permits for bald eagles, and options for addressing take of golden eagles⁹. The MDIFW explained that since implementing covered bait restrictions in 2007, the agency has had no reported incidental captures of eagles. The ITP incorporates measures (such as the covered bait restrictions) to avoid the likelihood of take of bald and golden eagles, and the MDIFW does not anticipate take of bald and golden eagles from trapping activities. Therefore, Maine’s trapping program is compliant with BGEPA.

The Migratory Bird Treaty Act (MBTA) governs the take of any migratory bird, part, nest, egg, or product. Take, as defined in the MBTA, includes by any means or in any manner any attempt at hunting, pursuing, wounding, killing, possessing, or transporting any migratory bird, nest, egg, or part thereof. Neither the MBTA nor its implementing regulations explicitly authorize the Service to issue permits to authorize incidental take of migratory birds. But, Executive Order 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds* (January 10, 2001) provides requirements for all Federal agencies to incorporate considerations of migratory birds into their decisionmaking, including the conservation of migratory birds, the proper evaluation of them in NEPA documents, and avoidance, minimization and mitigation of migratory bird impacts and take, where appropriate and in harmony with agency missions. In particular, section 3(6) states that environmental analyses required by NEPA “evaluate the effects of actions and agency plans on migratory birds, *with emphasis on species of concern*” (emphasis added). Section 2(i) defines “species of concern” as:

⁹The Service is not currently issuing permits for take of golden eagles east of the 100th Meridian; hence, a golden eagle take permit is not currently an option for the MDIFW.

those species listed in the periodic report ‘Migratory Nongame Birds of Management Concern in the United States,’ priority migratory bird species as documented by established plans (such as Bird Conservation Regions in the North American Bird Conservation Initiative or Partners in Flight physiographic areas), and those species listed [under the ESA].

Importantly, the responsibility of the Federal agency is not to forecast the take of every migratory bird. Rather, under section 3(9), agencies should:

[i]dentify where unintentional take reasonably attributable to agency actions...is likely to have a measurable negative effect on migratory bird *populations*, focusing first on species of concern, priority habitats, and key risk factors.

It is against this backdrop that the Service advised the MDIFW regarding the risk of take of migratory birds through its trapping programs.

In our EA, we recognized the limited information on the number of birds incidentally taken by fur trappers in traps (section 5.1.3.2). Our analysis is therefore in part premised on information provided to us by the MDIFW and the best available science, which we independently reviewed. An October 2014 memorandum provided to the Service by the MDIFW describes the current information on both the potential for trapping-related take of birds as well as efforts the agency is implementing to address this issue (final EA, appendix 2). The memorandum explains why data collected from a best management practice study shows that take of migratory birds from furbearer trapping in Maine is low and would have negligible impact on migratory bird populations. Since implementing covered bait restrictions in 2007, the MDIFW reports that the incidental capture of all birds is greatly reduced. The ITP incorporates measures (such as collecting information on the take of migratory birds in traps using several different methods and committing to implement additional measures in the event that new information shows take of migratory birds is occurring to any great extent (final EA, appendix 2) to continue to address the potential for take-related impacts to migratory bird populations.

Our own analysis demonstrates that effects to bird populations will be negligible at a statewide population scale and minor at a local population scale; bird species potentially affected by trapping (e.g., corvids and raptors) are generally not those “of concern,” but rather have populations that can withstand the amount of take associated with trapping. This is in part so given the nature of the trapping activity, coupled with the seasonality in which it and winter resident birds occur. In our EA, we examined the potential effects of incidental take from trapping and the effects of the proposed mitigation on gray jays (EA section 5.1.3.2). Although this is not the only species incidentally trapped, it likely represents the most frequently trapped nonfurbearer species in boreal environments. Thus, the gray jay served as a reasonable proxy for migratory birds for the purposes of our analysis. In our EA, we documented the best available science concerning the rate at which gray jays were incidentally trapped in relation to pine marten, one of the most actively sought furbearers in the boreal forest. We estimated incidental trapping of up to 3,015 gray jays annually from an estimated population of 92,839 gray jays in northern Maine or 3.2 percent of the statewide population. Based on this analysis, we believe that incidental take of gray jays and other species commonly trapped (crows, ravens, hawks, owls) would not have statewide population-level effects, but could have minor effects on local populations.

In conclusion, the Service finds that the activities proposed in the ITP will not be conducted for the purpose of causing take of Canada lynx and are anticipated to be otherwise lawful; therefore, the Service concludes that the anticipated take associated with the project will be incidental to otherwise lawful activities.

2. The MDIFW will, to the maximum extent practicable, minimize and mitigate the impacts of such taking

To issue an incidental take permit, the Service must find that “the applicant will, to the maximum extent practicable, minimize, and mitigate the impacts of the taking.” 16 U.S.C. 1539(a)(1)(B)(ii); 50 C.F.R. 17.22(b)(2)(B) & 17.32(b)(2)(B).

The Service’s habitat conservation planning (HCP) guidance (USFWS 2000) states that:

[t]he applicant decides during the HCP development phase what measures to include in the HCP (though, obviously, the applicant does so in light of discussions with and recommendations from FWS [Service] or NMFS [National Marine Fisheries Service]). However, the Services ultimately decide, at the conclusion of the permit application processing phase, whether the mitigation program proposed by the applicant has satisfied this statutory issuance criterion.

To do so, the Service must examine and predict the adequacy and effectiveness of the applicants’ proposed minimization and mitigation measures. It is important to understand that in doing so, the Service is focused solely on measures to be undertaken to reduce the likelihood and extent of the take resulting from the project as proposed, as well as appropriate compensatory measures. It is the Service’s position that the impacts of the proposed project that were not *eliminated* through the ITP/HCP process, must be minimized to the maximum extent practicable, and then those remaining impacts that cannot be further minimized must be mitigated commensurate with the level of take. These standards are based in a *biological determination* of the impacts of the project as proposed, what would further minimize those impacts, and then what would biologically mitigate, or compensate for, those remaining impacts.

If an applicant commits to implement minimization and mitigation measures that are fully commensurate with the level of impacts, or are consistent with what current science demonstrates to be effective, it has minimized and mitigated to the maximum extent practicable. See, for example, National Wildlife Federation v. Norton, 306 F. Supp. 2d 920 (E.D. Cal. 2004) (finding that the level of mitigation provided must be “rationally related to the level of take under the plan” and that where mitigation “more than compensates” for the impacts of take, it did not need to demonstrate that more mitigation would be infeasible)¹⁰. National Wildlife Fed’n v. Babbitt, 306 F. Supp. 2d 920, (E.D. Cal. 2005). Thus, it is only where certain constraints may preclude attaining these proven measures or thresholds that the “practicability” issue needs to be addressed more thoroughly.

In those circumstances where the applicant cannot fully achieve the minimization and mitigation standards, the Service must evaluate whether the applicant has still minimized and mitigated “to the maximum extent practicable.” The court in National Wildlife Fed’n v. Babbitt (2005) noted that the term “practicable” as used in the ESA does not simply mean “possible” but means “reasonably capable of being accomplished.” It also corroborated that “there are two components to the mitigation finding: (1) the adequacy of the mitigation program in proportion to the level of take that will result, and (2) whether the mitigation is the maximum that can be practically implemented by the applicant.” *Id.* Factors to be considered in the practicability analysis may include constraints based on the site itself, availability of mitigation habitat, timing and nature of the project, financial means of the applicant, cost and time associated with redesign, and local and state permitting and zoning processes. In these instances, the

¹⁰ In deferring to the Service’s interpretation of the term, the Court also explained that “[t]he words “maximum extent practicable” signify that the applicant may do something less than fully minimize and mitigate the impacts of the take where to do more would not be practicable. Moreover, the statutory language does not suggest that an applicant must ever do more than mitigate the effect of its take of species.”

Service must evaluate whether the applicant has provided reasonable explanations concerning its constraints or infeasibility. The Service must also independently review the record evidence supporting the applicant's assertions. The practicability evaluation is necessarily project specific, and may properly yield different determinations in different situations. The analysis is a limited, although substantial, examination. But the Service need not examine practicability where the applicant has already committed to implement minimization and mitigation measures commensurate with the impacts of the taking. In those circumstances, no more is required of the applicant.

The impact of the take from the covered activities (i.e., furbearer trapping through the recreational fur and trapping in the PM and ADC programs) that needs to be addressed by the ITP are the potential for injuries and fatalities when lynx are incidentally captured as nontarget species in traps. While the capture event itself is considered take under the ESA, the incidental capture and release of uninjured lynx does not result in a discernable impact that needs to be addressed. In addition, minor injuries (e.g., bruising and small scratches) are not anticipated to affect the ability of lynx to function naturally in their environment and thus also do not rise to a discernable impact. Data are presented in both the final EA (section 4.2.1) and the ITP (section 5.3) showing that these capture events do not change the survivorship of lynx. However, more severe injuries (e.g., fractures, lacerations) could affect the ability of lynx to function naturally in their environment and may affect their ability to survive postrelease. In addition, capture events that lead to fatality clearly impact the lynx and have impacts to the lynx population (through the loss of a contributing individual). Therefore, while it is prudent to avoid the capture of nontarget species, such as lynx, in the first place, the impact of the take that ultimately needs to be addressed is the potential for injuries that are more than minor and fatalities that may result from incidental capture events.

Avoidance and Minimization Measures (final ITP section 5.2)

The avoidance and minimization measures in the MDIFW's ITP are described in detail in section 5.2 and are outlined in section 1 above. Lethal (e.g., killer-type traps) and nonlethal (e.g., foothold traps, cable restraints, and cage traps) trapping techniques result in different impacts, and thus the conservation measures are discussed separately below. However, the MDIFW's strategy for each trapping technique generally relies on (1) establishing effective regulations, (2) implementing education and outreach to ensure regulations are properly implemented, (3) monitoring effectiveness of the regulations and implementing changes as needed, and (4) reinforcing implementation of the regulations through compliance monitoring.

Lethal trapping techniques (e.g., killer-type traps) generally result in severe injuries or fatalities to lynx that are incidentally caught. Therefore, the conservation strategy in the ITP is designed to avoid the potential for incidental captures. Since 2007, as result of the consent decree, the MDIFW has had regulations requiring the use of leaning poles for elevated killer-type trap sets, the use of exclusion boxes for ground killer-type trap sets, and mandatory reporting of incidentally captured lynx. Since these regulations have been in place, the MDIFW does not have reports of lynx being caught in legally set killer-type traps. The few instances that lynx have been caught in killer-types (and thus were severely injured or killed) have been attributed to deviations from the trap set regulations and thus were determined to be illegal by the MDIFW. Therefore, if killer-type traps are set correctly (per the regulations), the avoidance measures appear to effectively eliminate incidental capture and thus severe injury or fatality from killer-type traps. The ITP incorporates the consent decree avoidance measures for lethal trapping techniques (final ITP section 3, table 3). The ITP also incorporates expanded efforts to educate and provide outreach to trappers to ensure that trappers are aware of the importance of these avoidance measures for killer-type traps and how to comply with the regulations (final ITP section 5.2). All licensed trappers, and trappers otherwise authorized to trap, will receive several types of educational materials and outreach through the ITP efforts to ensure that trappers understand their obligations, the regulations, and best practices to effectively avoid catching lynx in killer-type traps. In addition, the ITP

includes a commitment to increased compliance monitoring by wardens to ensure that trappers are setting killer-type traps in compliance with the regulations (final ITP changed circumstance #5). To ensure that leaning pole sets and exclusion boxes are effective avoidance measures for lynx, the MDIFW has incorporated contingency measures that will trigger changed circumstances in the event that even one lynx is killed or so severely injured from killer-type traps that it cannot be rehabilitated and released (final ITP section 5.4). The contingency initiates a process to modify the avoidance measures to ensure their effectiveness in avoiding future capture of lynx.

During ITP development, the MDIFW and the Service did consider concerns regarding whether leaning poles serve as an effective avoidance measure for killer-type traps. Discussions provided in both the final EA (section 5.3.1.1) and the ITP (section 5.2.1) go into depth on this issue. For example, the Service conducted an independent evaluation of leaning pole set regulations using Eurasian lynx that showed captive lynx can climb and access traps set according to these regulations. However, it is quite possible that captivity produced a different behavior than would be expected in the wild. The fact that the MDIFW does not have reports of lynx being caught in legally set killer-type traps since the regulations have been in place suggests the measure is effective when implemented correctly. To address Service and public concerns, the MDIFW has incorporated a very low trigger (one lynx killed or so severely injured that it cannot be rehabilitated and released in the 15-year permit period) for initiating changes to the avoidance measure. Therefore, while using exclusion boxes for elevated trap sets (similar to what is being done for ground sets) may be a viable alternative, the leaning pole approach in conjunction with an aggressive contingency plan will ensure equal effectiveness in preventing lynx from being captured in killer-type trap sets. The MDIFW disputes that exclusion boxes for elevated trap sets are a practicable alternative to leaning pole sets for many trappers. Since there should ultimately be no difference in outcomes for lynx, the Service agrees that MDIFW's approach will serve as an effective and biologically sufficient avoidance measure.

Nonlethal trapping techniques (e.g., foothold traps, cable restraints, cage traps) are generally nonselective, meaning that they catch a variety of target and nontarget species, depending on where they are set in the environment. Unlike for killer-type traps, there are no exclusion devices that can be effectively implemented for nonlethal traps. Therefore, the conservation strategy in the ITP does not incorporate avoidance measures aimed at preventing or reducing the capture rate from nonlethal trapping techniques. However, nonlethal trapping techniques generally do not result in fatalities or severe injuries to incidentally caught lynx. Nonlethal traps (i.e., restraining traps) are intended to hold or restrain the captured animal until the trapper arrives to dispatch or release the animal. Data presented in both the final EA (section 5.3.1.1) and the ITP (final ITP table 4.2.2) shows 94 percent of lynx caught in foothold traps in Maine had no visible or only mild injuries, though 6 percent had moderately severe to severe injuries. Therefore, the conservation strategy in the ITP is designed to minimize the potential for injury from nonlethal trapping techniques. The MDIFW trapping regulations require trappers to release nontarget species unless they are dead, in which case the carcasses must be submitted to the MDIFW, and trappers must immediately report incidentally captured lynx (final ITP section 5.2). The MDIFW trapping regulations also require that trappers tend foothold traps every 24 hours (final ITP table 3). To minimize the potential for injuries and fatalities of lynx in nonlethal traps, the ITP incorporates a process for assessing incidentally captured lynx for potential injuries and then treating lynx that have more than minor injuries to ensure they continue to function naturally in their environment (final ITP section 5.2). The process begins with the trapper immediately reporting incidentally captured lynx to the MDIFW hotline and a commitment for trained MDIFW staff to respond to lynx capture events. The ITP incorporates veterinarian oversight of the injury assessment process to include developing a new field-based injury assessment protocol, regular training of the MDIFW staff, and periodic veterinarian participation in evaluating lynx in the field during incidental capture events. In addition, the ITP includes a commitment to treat, rehabilitate, and release any lynx that have more than minor injuries. Those lynx that cannot be released are treated as a lethal take in the take allocations requested by the MDIFW, which

are limited to three in the 15-year permit period. The ITP incorporates expanded efforts to educate and provide outreach to all trappers (licensed or otherwise authorized) to ensure that trappers understand how to avoid capture of lynx in the first place and then how to manage lynx that are incidentally captured in a trap (final ITP section 5.2). Finally, the ITP incorporates several contingency measures that trigger changed circumstances in the event that the overall number of lynx captured exceeds what was anticipated or the number of severe injuries or fatalities exceed what was anticipated (final ITP section 5.4). The Service agrees that this is a practicable and reasonable process for minimizing and addressing potential injuries and fatalities from incidental captures in nonlethal traps.

During ITP development, the MDIFW and the Service did consider how different nonlethal trap types (e.g., best management practice (BMP) traps for target species) may influence injury rates for incidentally captured lynx. Discussions provided in both the final EA (section 5.3.1.1) and the ITP (final ITP section 7.3) go into depth on this issue. For many target furbearer species, the Association of Fish and Wildlife Agencies has tested and recommended certain trap types, trap sizes, and trap features (e.g., padded and offset jaws for foothold traps) as best management practices for catching the animals and minimizing injury rates. These recommendations are specific to the target species and the testing did not evaluate the consequences to nontarget species. While it is reasonable to assume that BMP traps may also have benefit to nontarget species, data have not been collected (as far as the Service is aware) to evaluate this. In fact, data provided by the MDIFW suggest that injury scores of lynx caught in Maine by fur trappers and examined externally were similar to injury scores observed for coyotes and bobcats caught during BMP trap testing (final ITP section 7.3). We explain some limitations with external injury assessments in the final EA (section 5.3.1.1); however, such assessments should be sufficient in most cases to evaluate the type of injuries (e.g., more than minor) that will affect the ability of lynx to function naturally in their environment and may affect their ability to survive postrelease. Therefore, we assume that the injury rates presented by the MDIFW reflect what will occur throughout ITP implementation. In the event that severe injuries or fatalities are higher than anticipated in the ITP, the ITP's changed circumstances provisions will allow modification of the minimization measures in the plan to ensure injury rates from nonlethal trap types are minimized to the maximum extent practicable. Based on the MDIFW's minimization plan, the data that MDIFW has presented, and the commitment to modify the plan in the event it is less effective than anticipated, the Service agrees that MDIFW's approach will serve as an effective and biologically sufficient minimization measure.

Another issue that has been considered in detail by the MDIFW and the Service specific to foothold traps in the ITP is that the current limitation on trap size will not be continued (i.e., that consent decree requirement will be rescinded). Discussions provided in both the final EA (section 5.3.1.1) and the ITP (final ITP section 7.3) go into depth on this issue. While the Service has raised the concern that larger and heavier traps with a larger jaw spread could increase injury rates in incidentally captured lynx, there is little information to specifically evaluate this issue. The MDIFW provided data that suggest that the injury rate for incidentally captured lynx prior to the consent decree (when there were no trap size restrictions) was similar to or lower than the injury rate for coyotes and bobcats caught in BMP traps (final ITP section 7.3, tables 7.3.2 and 7.3.3). To address Service and public concerns, the MDIFW incorporated changed circumstances provisions in the event that severe injuries or fatalities are higher than anticipated in the ITP that will allow modification of the minimization measures in the plan to ensure injury rates from nonlethal trap types are minimized to the maximum extent practicable. This may include reapplying foothold trap size limitations if higher injury rates are caused by larger trap sizes. Based on the MDIFW's minimization plan, the data that MDIFW has presented, and the commitment to modify the plan in the event it is less effective than anticipated, the Service agrees that MDIFW's approach will serve as an effective and biologically sufficient minimization measure.

Nonlethal cable restraints are a nonlethal trapping technique that may be phased-in through the ITP. This will be a new technique that may be available to fur trappers if the MDIFW can demonstrate through pilot

projects, conducted by State employees and agents, and a phased-in approach that the technique results in the same or lower rates of injuries than occurs under its existing program. Nonlethal cable restraints are not snares, and the MDIFW will not be changing the existing prohibitions on the use of snares in Maine under this plan. The final EA (section 5.3.1.1) provides an indepth assessment of this trapping technique. Cable trapping methods (e.g., foot snares and nonlethal cable restraints) are increasingly being accepted because of relatively low injury rates for canids (Vantassel et al. 2010). There are no studies to evaluate injuries to lynx or bobcat in cable restraints. The MDIFW does not anticipate lethal take or severe injuries in cable restraints because of the low injury scores in field trials with other furbearer species (Olson and Tischaefter 2004, Munoz-Igualada et al. 2010). The ITP provides some details on the specifications that will be considered for nonlethal cable restraints as the pilot efforts are developed. However, many of the details are left to develop based on a review of the best scientific information available at the time the pilot efforts are implemented. Ultimately, the MDIFW will work to minimize the risk nonlethal cable restraints pose to nontarget species, such as lynx. Under the ITP, they will not be able to use this trapping technique more broadly unless they demonstrate that injury rates are the same or lower as those under the existing program. In that sense, to the extent this trapping technique replaces the use of other nonlethal trapping techniques (such as foothold traps), the injury and/or fatality rates may decrease from what is currently anticipated under the plan. Therefore, the Service agrees implementing a phased in approach for nonlethal cable restraints is practicable and reasonable and that the program will minimize the potential for injuries and fatalities to lynx.

Cage traps are another nonlethal trapping technique that may be implemented through the ITP. The final EA (section 5.3.1.1) provides an in depth assessment of this trapping technique. Based on the existing scientific information, we assume lynx incidentally trapped in cage traps will generally have no or only minor injuries. Use of this trapping technique is not anticipated to result in more severe injuries or fatalities. Therefore, the Service agrees that MDIFW's approach will serve as an effective and biologically sufficient minimization measure.

In addition to the specific minimization measures, there were several other overarching issues that received considerable focus by the MDIFW and the Service during development of the ITP. These include reporting rates and how the ITP addresses illegal trapping. The reporting of incidentally captured lynx by trappers is the primary means to monitor incidental take and respond to changed circumstances. Prompt reporting also ensures that MDIFW staff can evaluate and treat incidentally trapped lynx and gather important information (biological information on the animal, type of trap and set, injury score for the animal, and other factors). The MDIFW provided information that suggests underreporting of incidentally captured lynx has not been an issue under the current trapping program (J. Connolly, MDIFW email to the Service, August 9, 2013). Since 2008, the MDIFW has required reporting of incidentally trapped lynx (final ITP, section 5.2.1, RC 2). From 2000 to 2007 (prior to the mandatory reporting requirement) 81 percent of the lynx known to be caught in traps were reported to the MDIFW by trappers. In 2009, 1 year after mandatory reporting was initiated, 23 of 24 lynx known to be captured (96 percent) were reported. The Service's response to comments on the 2008 draft EA (revised draft EA, appendix 1, response 2.3.14) provides additional information and assessment of this reporting issue. The ITP addresses the potential for nonreporting in several ways. There are commitments for increased compliance checks by the Maine Warden Service to ensure that trap sets are compliant with regulations (final ITP section 5.2.1). This will also be a tool for independently monitoring incidental capture of lynx. For example, if wardens are finding a higher level of lynx captures than is reflected by the reporting rate information, that may suggest a problem that the MDIFW will need to resolve. The MDIFW believes current state and Federal penalties and stepped-up enforcement are sufficient to encourage reporting, and if not, the issue will be addressed as a changed circumstance, which could result in increased penalties. The MDIFW will monitor compliance with mandatory reporting by tracking the number of lynx reported in a database (final ITP section 5.2.1). Based on the MDIFW's minimization plan, the data that MDIFW

has presented, and the commitment to modify the plan in the event that reporting rates are determined to be an issue, the Service agrees that MDIFW's approach is reasonable and will be effective.

There was also considerable focus by the MDIFW and the Service during development of the ITP on how best to address illegal trapping in the context of the ITP. The MDIFW is seeking incidental take authorization for the incidental capture of lynx through legal trapping conducted as part of the recreational fur trapping, PM, and ADC programs. The MDIFW does not want to accept liability for lynx that are captured, injured, or killed by trappers that are not following the MDIFW trapping regulations or are intentionally breaking the law. The MDIFW has implemented specific trapping regulations, and will be implementing additional measures in the ITP, specifically to address incidental capture and potential injury of lynx. If trappers do not follow these measures and do not comply with the regulations, then the MDIFW acknowledges that lynx may be illegally captured and killed. The MDIFW is clear in the ITP that it will investigate every lynx capture event, in cooperation with the Service law enforcement staff, and illegal activities will be prosecuted to the full extent of State and Federal law. There are circumstances addressed in the ITP where minor deviations in the regulations by trappers (e.g., failing to put name tags on traps) would not affect whether lynx are more at risk from the trapping activities. If lynx are captured in traps with minor deviations from the regulations (as defined in section 3.3 of the ITP), the MDIFW trapping program is responsible for the capture event. In that situation, the ITP measures and process apply. However, major deviations of the trapping regulations that contribute to the incidental capture of lynx will not count against the MDIFW incidental take authorization. The final ITP outlines the process that will be followed to determine whether a deviation is minor or major with respect to the ITP authorization. The Service acknowledges that dealing with illegal trapping in the context of this ITP is challenging, but agrees that the process established by the MDIFW is practicable and reasonable and will ensure that the plan adequately addresses the potential for injuries and fatalities as intended.

The incidental take permit standard by which the Service evaluates whether an applicant's conservation plan minimizes take to the maximum extent practicable is based on a biological determination of the anticipated effectiveness of the proposed minimization measures and whether additional measures are required to further minimize those impacts. The ITP incorporates avoidance measures to prevent lynx from being captured in killer-type traps and minimization measures to reduce the potential for lynx to be injured in nonlethal traps. The conservation strategy relies on (1) establishing effective regulations, (2) implementing education and outreach to ensure regulations are properly implemented, (3) monitoring effectiveness of the regulations and implementing changes as needed, and (4) reinforcing implementation of the regulations through compliance monitoring. The MDIFW's proposed avoidance and minimization measures rely on practices that have thus far proven effective at avoiding and minimizing capture and injury of lynx. The plan will result in increased effectiveness through the enhanced educational and compliance monitoring efforts. Uncertainties regarding aspects of some measures are bounded by contingencies that trigger changed circumstances that will result in modifications to ensure the effectiveness of the plan over time. Therefore, the Service finds that the proposed avoidance and minimization measures are biologically sufficient and that no additional measures are necessary or required to be further evaluated for practicability.

Mitigation Measures (final ITP section 5.3)

The mitigation measures in the ITP are described in detail in section 5.3 and are outlined in section 1 above. As previously explained, the impacts of the take attributed to the covered activities (trapping through the recreational furbearer trapping program and the PM and ADC programs) are (1) severe injuries that affect the ability of lynx to function naturally in their environment and may affect their ability to survive postrelease, and (2) capture events that lead to fatality. The capture and release of lynx in traps with no or only minor injuries is not anticipated to have a discernable impact, though it is

considered take under the ESA. The minimization program in the ITP is aimed to address the more severe injuries, as those lynx will be treated and/or rehabilitated to the point they can be released back into the wild to function naturally in their environment. However, the MDIFW does anticipate that over the 15-year permit period up to three lynx could be severely injured such that they cannot be released back into the wild or may be killed in traps (together considered as lethal take for the purposes of this plan). Therefore, the ITP incorporates habitat-based mitigation that is intended to compensate for the lethal take of up to 3 lynx anticipated in the plan, and thus more than offsets the impacts of the take (i.e., loss of 3 lynx over a 15-year permit period from a lynx population that is currently at least 500 individuals in Maine—an average of 0.04 percent of the population annually).

To compensate for the loss of three lynx from trapping, the MDIFW will implement an agreement with MBPL to manage an area of declining hare habitat so that it continues to support lynx into the future. The core commitment is for the MBPL to maintain and enhance 6,200 acres of HQHH on a 22,046-acre area of the MBPL Seboomook Unit. Both the MDIFW and the Service believe that the mitigation area likely already is used by lynx that occur in northern Maine. Not only is the area in the core of Maine's lynx range and has existing high quality habitat to support lynx, but also the MDIFW has records of lynx observations in close vicinity to the mitigation area (final ITP, figure 1.1), and recent lynx habitat models predict this area to have a high probability of lynx occurrence. However, without the mitigation, several lynx are anticipated to discontinue use of the area during the permit term because of a diminished prey base. The details of the mitigation strategy are explained in the final ITP (section 5.3). The MDIFW has committed in concept to mitigation that is consistent with the Service's *Canada lynx habitat management guidelines for Maine* (USFWS 2007). Although the Service's guidelines specify 20 percent of a 35,000-acre lynx habitat unit should be in optimal HQHH, MDIFW (with the Service's support) committed to maintaining 6,200 acres of HQHH on a 22,046-acre (township-sized and lynx home range-sized) lynx habitat area on the MBPL Seboomook Unit, which is in accord with the best available science (Simons-Legaard et al. 2013). Specifically, MDIFW will work with the MBPL to document baseline habitat conditions, model the trajectory of HQHH (lynx habitat), identify potential shortfalls, and conduct silvicultural practices identified in the Service's lynx guidelines to create new habitat to offset these shortfalls. Initially the MBPL anticipates that 6,200 acres of high quality habitat will be achieved through timber management (i.e., overstory removal) on approximately 4,130 acres that will convert existing mature forest habitat to young softwood-dominated forest (final ITP, section 5.3). There are approximately another 2,070 acres of existing stands that will continue to provide high quality foraging habitat over time. It is likely that the habitat created by mitigation activities will become suitable for lynx within 7 to 15 years postharvest depending on the type of harvest activity, and would continue to provide habitat until the stands are about 35 years old. Thus, HQHH created by mitigation forestry may be present on the mitigation area until 2052 to 2064, depending on when forest management occurs during the permit period.

The forest management plan will provide the details as to when, how much, and precisely what activities are required to ensure that 6,200 acres of HQHH are enhanced and maintained on the mitigation area. The Service will review the forest management plan for sufficiency prior to implementation to ensure that it will achieve the mitigation objectives. Further, MDIFW will demonstrate the achievement of the required net increase of 3 lynx, as demonstrated by the creation, maintenance or enhancement of 6,200 acres of HQHH, through the required monitoring in the ITP. This monitoring will provide the Service with an assessment lynx presence and numbers (for each of the first 5 years and every 5 years thereafter), hare densities (for the first 5 years), and the amount of HQHH (every 5 years for the entire permit period).

We note that this mitigation commitment is higher than the 4,700 acres of high quality foraging habitat in a 10,000-acre area that the MDIFW was initially considering. While the MDIFW relies on radio-telemetry data (final ITP section 5.3) to demonstrate that acreage is sufficient to support overlapping home ranges of three lynx, the Service is also relying on data that shows maintaining 27 percent of a lynx

home range-size area as HQHH will provide greater certainty that lynx will continue to be supported on the landscape (Simons-Legaard et al. 2013, Simons 2009). To achieve a lynx home range-size area, the MDIFW expanded the area of the Seboomook Unit being considered to 22,046 acres, which then slightly increased the acreage required to achieve the 27 percent commitment. In either case, the MDIFW's commitments in the final ITP are consistent with maintaining lynx on the landscape and thereby fully offsetting the lethal take anticipated from the trapping program.

Approximately 2,111 acres (9.2 percent) of the 22,046-acre area on the MBPL Seboomook Unit is mapped deer wintering areas (DWAs). In winter, deer require mature softwood that intercepts snow and provides thermal cover, whereas lynx require young, regenerating softwood stands. However, the MDIFW indicated that lynx habitat management will take precedence over DWA management on the Seboomook Unit and that DWAs will be cut to maintain and enhance lynx habitat (J. Connolly and J. Wiley, MDIFW, personal communication August 19, 2014). The MDIFW has explained that young softwood-dominated forests become future mature DWAs, and thus managing a forest for both objectives can be compatible.

The MDIFW and MBPL are implementing a memorandum of understanding (MOU) that establishes the agreement for MBPL to implement the mitigation that is required by the ITP. While the MBPL already has a policy in place that includes promoting the conservation of all state- and federally listed, endangered, threatened, and candidate species of plants and animals and their critical habitats within the boundaries of its managed lands, the mitigation required by the ITP will result in forest management actions to create HQHH that would not normally be implemented by the agency. As a condition of the ITP, the MBPL is required to develop a forest management plan within 3 years of permit issuance that demonstrates how the mitigation commitments will be achieved and provides a detailed prescription for forest stand treatments. The ITP requires that the plan is reviewed prior to implementation by the Service. While forest management activities could be constrained by other resource objectives (such as providing for DWAs), the MOU between the MDIFW and MBPL clearly explains that lynx habitat management will take precedence over other resource issues in the established mitigation area. We note that the fact that it will take MBPL up to 3 years to complete the stand exams, develop a forest management plan, and begin implementing forest management activities should not be an issue relative to offsetting the impacts of take. That is largely because lethal take of three lynx over a 15-year period suggests that it will be a rare event, it has a low probability of occurring within that first 3-year period, and the impact of the take (i.e., loss of an average of 0.04 percent annually of the current lynx population) is very small.

The size of the lynx population in Maine is dependent on the size of the snowshoe hare population (the primary forage base for lynx), which in turn is significantly influenced by the amount of early successional stage conifer (i.e., softwood) forest habitat. Therefore, as that forest type changes, so does the hare population followed by the lynx population. Current HQHH in the lynx range in Maine (regenerating softwood 15 to 35 years postharvest) was created as a legacy of clearcutting during the spruce budworm era (1973 to 1985). Much of that habitat is now getting older and growing out of stand conditions that support high hare populations. Thus, a near-term threat to the existing lynx population in Maine is the loss of HQHH. Many areas that currently support lynx may soon not be able to do so as landscape hare densities decline. Therefore, the lynx that continue to use the mitigation area due to hare habitat enhancement (i.e., that would otherwise be lost) are considered as the offset for the purpose of compensating for take. The MDIFW will need to demonstrate through implementation of the mitigation that sufficient high quality habitat is created or maintained (that would otherwise be lost) to support three lynx (i.e., the number of lynx anticipated to be killed or severely injured and nonreleasable) that would otherwise have discontinued use of the mitigation area. It is also possible that lynx that use the mitigation area may experience higher fecundity rates due to the amount of high quality foraging habitat concentrated in their home ranges. The MDIFW's 12-year radio-telemetry study reported that lynx

produced smaller litter sizes when hare densities were low, whereas they produced larger litter sizes when hares were more abundant (Vashon et al. 2012). This increase in fecundity could increase the value of the mitigation beyond just compensating for the loss of three lynx. Finally, the impacts related to the loss of three lynx through trapping are complex, in that declines in foraging habitat across the lynx range may produce an even greater impact over time. Therefore, mitigation that focuses on preserving high quality foraging habitat over a long period is particularly significant relative to the loss of three lynx over a 15-year period.

Baseline conditions concerning the status of lynx, snowshoe hare, forest stand conditions, and HQHH on the Seboomook Unit are currently unknown. The area currently has a high probability of supporting lynx and may support a breeding unit (an adult male and up to three adult females) (Simons 2009, p. 100, 102). Without mitigation, the MBPL would have managed the area for mature softwood by using precommercial or commercial thinning to accelerate growth. This would continue the trajectory of the current stands growing out of HQHH conditions. Instead, the MBPL intends to increase overstory removal of some partially harvested stands to release the regenerating softwood understory, which will become future HQHH. The MBPL currently is implementing a contract to update the stand-type map of the area and plans to collect additional information on stocking rates and understory conditions in a compartment cruise of the area in 2015. This information will provide a better evaluation of current acreage of HQHH, stand ages, and understory conditions (particularly in the more recent partial harvest stands). The MBPL will also develop a forest model, which will forecast future HQHH under the current management and identify opportunities for mitigation under the revised management.

Key components of the mitigation commitment include collecting the forest stand information and developing the management plan, which ultimately will demonstrate how the Seboomook Unit will be managed to achieve the habitat mitigation to offset lynx fatalities from trapping. Important variables will include the acreage amount and location that will be required for treatment and how those treatments will be completed within the ITP permit duration. Once some of the shelterwood stands are treated (e.g., overstory removal for existing two-story softwood stands), there will be a lag time of between 7 and 15 years (depending on the type of treatment) before the stand is in a condition to provide HQHH. Then, the stands will provide that high quality habitat for 15 to 20 years before again maturing past the optimal conditions. It is that 15- to 20-year period where lynx will continue to be on the landscape due to the mitigation efforts. Even though that period will extend past the end of the ITP term, it is the forest management treatments that occurred within the permit period that create the required mitigation and ultimately allow lynx to persist in the area. The forest model and forest management plan will need to demonstrate that the mitigation will provide sufficient foraging habitat to offset take of three lynx. The ITP includes changed circumstance provisions that establish contingencies in case the forest management plan cannot meet the required lynx mitigation objectives.

There are several ways that the mitigation objectives could not be met (e.g., HQHH may not sufficiently decline on the area to warrant mitigation at this site: there could be insufficient softwood stands to provide adequate mitigation at the site, there could be constraints due to DWA and recreation issues, the MBPL may not be able to meet its harvesting schedule, the MBPL's silviculture may not produce high hare densities, and other ways). The MDIFW addressed uncertainty concerning the mitigation as a changed circumstance (final ITP section 5.4). If this changed circumstance is triggered, the mitigation commitment would likely either have to incorporate more acreage for treatment (i.e., expand the mitigation area), extend the treatment for a longer duration, or shift to a new mitigation area. These changes would also likely trigger the need to modify the MOU between the MDIFW and the MBPL, and in some cases could trigger an amendment to the ITP and/or incidental take permit.

The MDIFW will monitor lynx, snowshoe hare, and HQHH on the lynx mitigation area. To document baseline number of lynx present on the mitigation area, the MDIFW will conduct snow track surveys for 5

consecutive years. To monitor trends in the lynx use of the area thereafter, the MDIFW will conduct snow track surveys once every 5 years. Lynx numbers on the mitigation should mirror the expected habitat trajectory in the lynx forest management plan. To monitor the baseline landscape hare density on the mitigation area, the MDIFW will collaborate with Dr. Dennis Murray at the University of Trent, Ontario, Canada to conduct hare pellet surveys for 5 consecutive years on a plot established on the Seboomook Unit in 2014. To monitor trends in the hare population thereafter, the MDIFW will continue the hare survey at least once every 5 years thereafter. The MBPL and the MDIFW will document baseline habitat conditions in their October 2016 lynx forest management plan and will monitor habitat conditions (amount of HQHH) once every 5 years thereafter.

During ITP development, the MDIFW and the Service did consider whether allowing trapping on the mitigations area is compatible with achieving the objectives of the mitigation. The MBPL has authorization to close trapping in certain areas and does (e.g., within state parks), but allows trapping, hunting, fishing, and other recreational activities on most other state lands. There are several reasons that we think prohibiting trapping is not necessary. The probability of incidentally trapping a lynx on the mitigation area is proportional to the trapping effort. There is no current information on the number of trappers or trapper effort on the Seboomook Unit. The MDIFW requests incidental take coverage for 13 lynx annually on lynx WMDs 1-11, 14, 18, and 19. These WMDs constitute 19,855 square miles; thus, reported take is approximately one lynx/1,527 square miles/year. Based on this approximation, on average one lynx may be trapped on the 22,046-acre (34-square mile) mitigation area once every 50 years. Therefore, the probability of any particular lynx being incidentally trapped on the mitigation area is low, and the probability that it would be one of the few lynx that are severely injured through trapping in this plan is even more remote.

However, lynx are easy to incidentally capture in a trap, and it is possible that lynx could be caught during the next 15 years on the Seboomook Unit. Lynx have been incidentally trapped in adjacent and nearby townships (T 4 R15, T4 R14, T4 R14, T3 R13; EA figure 4.2.1; figure 1 in appendix 3). Based on fur-tagging records, the MDIFW estimated that coyote trapping effort in 2011 and 2012 on the Seboomook Unit was low (EA appendix 3 figures 2 and 3). On the other hand, the greater amount of mature conifer forest on the area would be expected to attract marten trappers. Note that marten trappers use killer-type traps and the ITP implements avoidance measures to preclude lynx from being caught in this type of trap. The area could also attract increased PM and ADC activity in DWAs in the future, which could increase the risk of incidental lynx capture over time. However, ultimately, the Service believes the impact of take of lynx is very low, and even if one happened in the mitigation area, the impact would be more than offset by the benefits of the mitigation project in the first place. This is especially true since the benefits of the mitigation will accrue annually, whereas the incidental capture of a lynx on the mitigation is likely to occur at most only once during the permit period, and more likely not at all.

Another reason why restricting trapping on the mitigation area would have little practical benefit is that lynx using the mitigation area will have home ranges that likely encompass large areas outside the mitigation area. Restricting trapping within only a portion of a home range will not substantially reduce the already remote probability of incidental capture of any lynx using the mitigation area.

The incidental take permit standard by which the Service evaluates whether an applicant's conservation plan mitigates to the maximum extent practicable is based on a biological determination that the proposed mitigation measures adequately offset the impact of the take. As previously explained, the impact of the take is ultimately the loss of three lynx from Maine's population or an average over the permit period of 0.04 percent of the population on an annual basis for a 15-year period. The mitigation program in the ITP will create or enhance foraging habitat in an area where declining foraging habitat condition would otherwise result in several lynx being lost from the landscape. The mitigation strategy is consistent with

the Service's landscape-level forest management recommendations for maintaining high quality habitat for lynx, and we agree that this type of mitigation is one of the most important measures that can be implemented to benefit lynx. While it will take several years for the MDIFW and MBPL to collect, compile, and develop the forest management plan that demonstrates how much forest management will ultimately be needed to maintain or create 6,200 acres of high quality foraging habitat in the 22,046-acre area of the Seboomook Unit, ensuring that 27 percent of a lynx home range-size area is maintained in a HQHH condition may be sufficient to offset the lethal take of three lynx through trapping. Finally, the mitigation measures are bounded by contingencies that trigger changed circumstances that will ensure the mitigation is sufficient, if the MDIFW and MBPL's initial assumptions prove to be inaccurate. Therefore, the Service finds that the proposed mitigation measures are biologically sufficient and that no additional measures are necessary or required to be further evaluated for practicability.

In conclusion, the above minimization and mitigations measures satisfy the maximum extent practicable standard. The minimization measures adequately reduce the likelihood and extent of incidental take of lynx, and the mitigation is commensurate with the level of take anticipated by the project.

3. The applicant will ensure adequate funding and procedures to deal with unforeseen circumstances will be provided.

Section 6.0 of the final ITP describes the costs associated with plan implementation. Most of the MDIFW's costs for implementing the plan do not require additional funding. Rather, they are part of the MDIFW's operating budget and subject to state appropriations. The additional costs for implementing the ITP include compliance monitoring, reporting, and responses to changed circumstances. Costs will also be incurred by the MBPL for new stand typing, stand cruises, forest modeling, developing a forestry plan, implementing forestry practices, and periodically monitoring and assessing habitat in the mitigation area. Similar to the costs incurred by the MDIFW, the costs incurred by the MBPL are part of the agency's operating budget and subject to state appropriations. As a condition of the permit, the MDIFW will annually provide evidence that it and MBPL have sufficient budgets to fully implement the plan. That assurance will extend to personnel and hard costs.

Funding assurances for this permit are complicated because they rely on the biennial state government appropriations process. The final ITP requires the MDIFW to annually provide confirmation to the Service that the MDIFW's and MBPL's budgets have sufficient funds to cover implementation of the plan¹¹. By July 15th each year, the MDIFW will provide evidence that Maine's Legislature has appropriated sufficient funding to implement this plan. Evidence will need to demonstrate that sufficient funds are available to fund positions critical to implementation of the plan and for the implementation costs (including monitoring, reporting, and responses required to address changed circumstances). Because plan implementation is critical for ensuring the ITP is achieving the biological goals, the final ITP also clarifies that failure to annually ensure adequate funding to implement the plan is grounds for suspension or partial suspension of the ITP, and that incidental take authorization under the permit is contingent on demonstrating adequate annual funding for plan implementation.

The ITP identifies financial resources other than MDIFW's appropriations from which the agency could potentially fund ITP commitments. These include, among others, funds available from state and Federal agencies, other state programs, and grants from private individuals or nongovernmental entities. We

¹¹ Maine has a biennial budget process. By September 1 on even numbered years, the MDIFW prepares a budget request for the next 2 fiscal years. Maine's fiscal year is July 1 to June 30. The state budget is compiled and presented to the Legislature the following January. Afterwards, legislative committees hold hearings on the Department budgets, changes are made, and the final budget is assembled by the Appropriations Committee. The final budget is voted on by the Legislature sometime prior to adjourning in June.

agree that funding for the MDIFW's operating costs and ITP obligations can come from a variety of sources, so long as its procurement is legal, and the MDIFW annually demonstrates that it has received sufficient funds to cover prospective activities under the permit. With respect to use of the specified Federal funds, we agree with MDIFW's statement that their use is not unfettered or unlimited. For example, grants and license revenues under the Pittman-Robertson Wildlife Restoration Act are strictly regulated. Both the Act and the Service's regulations implementing it stipulate the purposes for which funds and license revenues can be used, and by which state entities. See 16 U.S.C. 777-777n, except 777e-1 and g-1; 50 C.F.R Part 80. Given that misuse of these funds and diversion of license revenue affect the MDIFW's eligibility for participation in the Wildlife Restoration program, we anticipate that it will closely coordinate with the Service prior to expending funds on ITP implementation. We expect the same regarding the use of ESA section 6 grants, which come with their own constraints.

Concurrent with permit issuance, the MDIFW will provide the Service with evidence that it has made a commitment for the first year of monitoring and reporting. This is important since implementation of the monitoring strategy is critical for ensuring the ITP is achieving the biological goals.

The Service finds that the MDIFW and the MBPL have ensured adequate funding for implementation of the ITP.

Changed Circumstances

Consistent with the issuance criteria, and the Service's five-point policy, the ITP includes procedures to address unforeseen circumstances. In addition, the ITP (section 5.4) incorporates changed circumstances, as outlined in section 1 above, which trigger procedures or changes in the conservation plan to adjust to new information or contingencies. The changed circumstances provide a mechanism for the MDIFW to adaptively manage the conservation program to improve its effectiveness in response to new information. The changed circumstances are more fully described in section 1 above, but include:

- Incidental trapping of lynx increases;
- The rate of severe injuries to lynx caught in traps increases;
- The rate at which lynx are incidentally killed in legally set traps increases;
- There is new information on lynx or trapping, or there are technological advances in trap design or monitoring;
- The proportion of compliant trappers setting killer-type traps checked by Maine Wardens falls below 95 percent;
- Mitigation acreage is not achieved; and
- The lynx population declines.

The MDIFW developed these changed circumstances to address key assumptions or areas of uncertainty identified in the ITP. The Service agrees that these contingencies are necessary and appropriate for assuring the conservation strategy achieves the avoidance, minimization, and mitigation objectives. For example, the effectiveness of leaning pole regulations is important because that is the primary measure for avoiding capture of lynx, and therefore injury or fatality, in killer-type traps. Therefore, the Service strongly endorsed incorporating a changed circumstance that allows modification of the avoidance measure in the event new information suggests leaning poles are not effectively avoiding take. Each changed circumstance trigger and response received considerable attention by the MDIFW and the Service to ensure they address the key assumptions in the plan and provide for a reasonable response that will ultimately assure that the plan achieves its biological goals and objectives and complies with the authorized permit conditions. In addition, most of the changed circumstances are designed to be triggered well before the amount of take authorized by the permit is exceeded.

The MDIFW, in coordination with the Service, will follow the monitoring procedures associated with changed circumstances outlined in the ITP (section 5.4) and will propose additional or alternative measures as the need arises to address changed circumstances. Most of the responses to changed circumstances will consist of modification to minimization measures, including outreach, law enforcement, and regulations. Some of the responses will require additional funding. The sources and amounts of funding that may be needed to fund commitments triggered by changed circumstances are described in section 6.0 of the final ITP.

In the event that a changed circumstance is triggered, the MDIFW will provide written documentation on the response, for Service concurrence, that explains what new measure will be implemented, the rationale for the measure, and how it will be evaluated for compliance. Depending on the nature of the response, amendment of the ITP and/or the incidental take permit may be required according to the amendment procedures described in section 8.0 of the final ITP.

In conclusion, the Service has determined that the MDIFW has adequately addressed uncertainty through changed circumstances.

Unforeseen Circumstances

Unforeseen circumstances are defined as changes in circumstances affecting a species or geographic area covered by the ITP that could not reasonably have been anticipated by plan developers and the Service at the time of the development and negotiation of the plan and that result in substantial and adverse changes in the status of the covered species. They are those events that are completely unpredictable (e.g., an earthquake or disease or parasite that causes the lynx population to decline), and that result in a substantial and adverse change to the status of a covered species. The final ITP (section 5.5) details the obligations of the MDIFW and the Service in the event of unforeseen circumstances. These incorporate the assurances guaranteed by the Service's "No Surprises" regulations (50 CFR 17. 22(b)(5) and 17.32(b)(5)), provided the final ITP is being properly implemented, and only for species adequately covered by the final ITP.

In conclusion, the Service finds that the MDIFW has ensured adequate funding for the final ITP and provided procedures to deal with unforeseen circumstances.

4. The taking of Canada lynx will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

The ESA's legislative history indicates Congress intended this issuance criterion be based on a finding, among others, that the proposed action is not likely to jeopardize a listed species pursuant to section 7(a)(2) of the ESA or adversely modify critical habitat. Implementing regulations for section 7 (50 CFR 402) defines "jeopardize the continued existence of" as "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." As a result, the Service has reviewed the project pursuant to section 7 of the ESA. In the Service's biological opinion, we concluded that issuance of the proposed ITP is not likely to jeopardize the continued existence of the Canada lynx. Below we provide a brief summary of the jeopardy analysis, but the complete analysis is provided in the biological opinion (USFWS 2014c).

The jeopardy analysis described in the Service's biological opinion (USFWS 2014c) assesses whether the proposed action would be reasonably expected, directly or indirectly to reduce appreciably the likelihood of both survival and recovery of the Canada lynx by reducing its reproduction, numbers, or distribution in

the wild. Jeopardy determinations are ultimately made for the listed entity, which is the rangewide distribution for the contiguous U.S. distinct population segment (DPS) of the Canada lynx. However, the jeopardy analysis is best conducted in the context of an analytical framework that addresses the effects at various scales, beginning with the smaller, local population. Since the action area for this proposal is the entire State of Maine, we start by considering the effects of the ITP on the Maine lynx population. Because we demonstrate that, in the context of the environmental baseline for the action area and the anticipated cumulative effects, risks to the Maine lynx population are unlikely to be appreciable, risks are even more unlikely at larger population scales (i.e., lynx in the northeastern United States or in the entire DPS), and we conclude that the action is not likely to jeopardize the continued existence of the species rangewide.

In formulating the biological opinion, we considered the following points:

1. The primary factor affecting lynx abundance and distribution in the action area is the abundance of snowshoe hare, the lynx's primary prey. Snowshoe hare density is, in turn, determined by the quantity and quality of boreal forest stands that have a dense horizontal understory, conditions that are generally found in unthinned forests that are approximately 12 to 40 years old.
2. Climate change may affect lynx via effects on the distribution of boreal forest and areas of persistent deep fluffy snow, as well as other more subtle paths such as incidents of fire and insect outbreaks and indirect effects on abundance of other wildlife species that prey on lynx; the scope and scale of such changes are uncertain, however, and the effects (positive or negative) on lynx may be variable across the landscape.
3. Predation by other wildlife species, competition with other wildlife species, vehicle collisions, trapping, and shooting are less influential, but nondiscountable factors affecting lynx in the action area.
4. Over the life of the proposed action, up to 3 lynx may be killed or have injuries severe enough that they cannot be fully rehabilitated and subsequently released; up to 9 may be severely injured but released following rehabilitation; and the remainder (183) will be released with no or only minor injuries. After considering several factors that affect these estimates, we generally concur with their accuracy. However consistent with our responsibility to provide a reasonable benefit of doubt to the species where there are uncertainties, we have considered the possibility that the collective effects of these factors will result in modest additional detected and undetected reductions in lynx survival or reproduction.
5. Based on information from lynx population model projections and from the observed results of directed lynx and bobcat harvest programs, the effect of anticipated mortalities and injuries on the lynx population is likely to range from completely compensatory during periods of high hare populations to small and short lived during periods of low hare populations and declining lynx numbers.
6. The indirect effects of trapper use of snowmobiles, driving on forest roads, or trapping snowshoe hares are insignificant.
7. Enhancement of lynx habitat at the MBPL's Seboomook Unit will offset mortality of three lynx incidentally killed by trapping during the life of the permit. Furthermore, although trapping mortality may often be compensatory, benefits to the lynx population due to improving habitat conditions (or preventing a habitat decline) are always additive.

8. Continuation of recent forest management practices that do not favor habitat conditions for snowshoe hare and lynx is a non-Federal action that is reasonably certain to occur in the action area.

After reviewing the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, we find that the proposed action is not reasonably expected, to reduce appreciably the likelihood of both survival and recovery of the Canada lynx by reducing its reproduction, numbers, or distribution in the wild. The number of lynx that are killed or severely injured such that they cannot be released or that will suffer reduced survival and reproductive output is very small, and the population-level effects of their loss will be compensatory or short lived. These trapping-related mortalities and injuries are likely to be distributed across a very large geographic area and over the 15-year life of the permit and will not result in any impact to distribution of the lynx population. Although the benefits of the mitigation will be located in a more closely defined portion of the action area, the positive effects will be additive and enduring. Thus, the net effects of the proposed action will range from positive (when trapping mortality and reduced reproductive output is compensatory) to neutral (when trapping mortality is additive). Since effects to the Maine lynx population are unlikely to be appreciable, we conclude that the proposed action is not likely to jeopardize the continued existence of the contiguous U.S. DPS of the Canada lynx (USFWS 2014c). This conclusion is based on the magnitude of the project effects (to reproduction, distribution, and abundance) in relation to the listed DPS.

Critical habitat for the Canada lynx is designated within the action area (i.e., the State of Maine). Canada lynx critical habitat Unit 1 totals 10,123 square miles located in northern Maine in portions of Aroostook, Franklin, Penobscot, Piscataquis, and Somerset Counties. However, trapping will have insignificant effects on the identified primary constituent elements (PCEs):

- (1) Presence of snowshoe hares and their preferred habitat conditions, which include dense understories of young trees, shrubs, or overhanging boughs that protrude above the snow, and mature multistoried stands with conifer boughs touching the snow surface;
- (2) Winter conditions that provide and maintain deep fluffy snow for extended periods of time;
- (3) Sites for denning that have abundant coarse woody debris, such as downed trees and root wads; and
- (4) Matrix habitat (e.g., hardwood forest, dry forest, nonforest, or other habitat types that do not support snowshoe hares) that occurs between patches of boreal forest in close juxtaposition (at the scale of a lynx home range) such that lynx are likely to travel through such habitat while accessing patches of boreal forest within a home range.

Trapping will not affect lynx denning sites, the availability or quality of matrix habitat, or the condition of snowshoe hare habitat.

One component of the PCEs is presence of snowshoe hares. As discussed in the biological opinion, snowshoe hares may be incidentally captured in foothold and killer-type traps. However, two approaches to estimating the number of snowshoe hares taken by trapping in Maine lead to the conclusion that this number is likely to be less than 0.03 percent of the snowshoe hare population. Therefore, we conclude that trapping will have an insignificant effect on the presence of snowshoe hares available to lynx in the action area.

Another component of the PCEs is deep fluffy snow. Although snowmobiles may compact snow, available studies in the Northern Rockies failed to support the hypothesis that snow compacted routes

adversely affect lynx habitat (USFWS 2014c). Use of snowmobiles for trapping constitutes a small fraction of overall snowmobile activity in the range of lynx in Maine. Therefore, we find that use of snowmobiles for trapping in the range of the lynx in Maine will have an insignificant adverse effect on deep fluffy snow.

The 2014 revised lynx critical habitat designation identifies Federal actions that increase traffic volume and speed on roads that divide critical habitat, including upgrading roads or development of a new tourist destination, as potential adverse effects on critical habitat. The proposed action entails no upgrading of roads. The number of trappers in Maine is small, and only a proportion of them use roads within the critical habitat to set and tend their traps. Road use during trapping is extremely unlikely to stimulate road upgrades in the critical habitat, and this traffic constitutes a small proportion of existing traffic volume. Therefore, we find that trappers driving on forest roads while trapping will have an insignificant effect on the function of critical habitat.

Mitigation consists of the creation of 6,200 acres of high quality hare and lynx habitat on a 22,046-acre area of the MBPL's Seboomook Unit. This habitat will consist of dense understories of young trees, shrubs, or overhanging boughs that protrude above the snow, and mature multistoried stands with conifer boughs touching the snow surface. The mitigation, therefore, will increase the amount of area containing the PCEs.

Therefore, we conclude that the proposed action is not likely to adversely affect the critical habitat PCEs and, hence, will not adversely affect critical habitat designated for Canada lynx in Maine. Incidental take of hares and the use of snowmobiles by trappers will have insignificant effects on the number of snowshoe hares and on snow conditions. Trappers driving on forest roads constitute an insignificant portion of traffic volume on roads within the lynx critical habitat. The effects of the proposed ITP mitigation on the PCEs will be wholly beneficial. Therefore, we find that no further consultation on the effects of the proposed action on the Canada lynx critical habitat is warranted.

In conclusion, the Service finds that the level of authorized take will not significantly affect lynx populations, will not have rangewide population effects, and will not appreciably reduce the likelihood of the survival and recovery of this species in the wild. The Service's biological opinion is that the action as proposed is not likely to jeopardize the continued existence of Canada lynx or adversely modify the critical habitat.

5. Other measures, as required by the Director of the Service, have been met.

The avoidance, minimization, and mitigation measures, funding assurances, and all other aspects of the ITP incorporate all elements determined by the Service to be necessary for approval of the ITP and issuance of the permit. Therefore, the Service finds that other measures, as required by the Director of the Service, have been met.

III. Public Comments

On November 9, 2011, the Service published a notice of availability and request for comments in the Federal Register for the MDIFW's first draft ITP dated August 13, 2008, and the Service's draft EA dated August 2011 (FR 76:69758-69760). The 90-day public comment period closed on February 7, 2012. The Service received 285 unique letters, 129 comment cards from public information sessions, and about 6,100 form letters. Based on some of the comments we received, changes were made to the draft EA and the draft ITP. The MDIFW substantially revised the draft ITP and requested incidental take permit coverage for two additional trapping programs and several new forms of trapping. On August 6, 2014, the Service published a notice of availability and request for comments in the *Federal Register* for the

MDIFW's revised draft ITP dated July 29, 2013, and the Service's revised draft EA dated August 2014 (FR 79:45838-45840). The 30-day public comment period closed on September 5, 2014. The Service received 5,400 individual comments letters. Responses to all substantive public comments are included in section 7 of the final EA. There were some changes to the final EA and the final ITP that respond to some comments provided during this supplemental comment period, as noted in the Service's response to comments. Following final action on the permit application, the Service will publish a notice of permit decision in the Federal Register.

IV. National Environmental Policy Act – Analysis and Findings

Pursuant to the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.), the Service prepared an EA (USFWS 2014b) that analyzed four alternatives:

Alternative 1 – This alternative represents the existing baseline conditions that incorporate the programs according to how the MDIFW is currently implementing them. No incidental take permit is issued. Fur trapping is continued consistent with the 2007 consent decree and the PM and ADC programs are continued statewide.

Alternative 2 – No incidental take permit is issued. Fur trapping, PM, and ADC programs are continued statewide. To avoid incidental take of Canada lynx from trapping-related programs, the MDIFW discontinues all upland trapping in lynx WMDs.

Alternative 3 - The Service issues an incidental take permit, and the MDIFW manages the fur trapping, PM, and ADC programs according to the final 2014 ITP.

Alternative 4 – The Service issues an incidental take permit only for the MDIFW's fur trapping program. The PM and ADC programs are not covered by the permit, and therefore, the MDIFW manages these programs in a manner that avoids incidental take of Canada lynx. For the purposes of the analysis of this alternative we assume that the MDIFW discontinues elements of the PM and ADC trapping in lynx WMDs that could take lynx (e.g., coyote and fox control). In addition, we assume that the MDIFW phases in the use of nonlethal cable restraints, but does so outside of the lynx WMDs.

In a previous EA (USFWS 2011), the Service considered five alternatives that included a number of minimization and mitigation measures, including phasing in the use of BMP foothold traps, exclusion boxes for all killer-type traps, elimination of blind and drag sets, and increased mitigation commitments. At that time, the Service did not believe that the MDIFW had fully considered various trapping techniques or approaches in developing its 2008 draft ITP. We therefore included alternatives comprising suites of various trapping methods and minimization measures, in part to solicit input on their desirability and effectiveness. Having now considered public responses to those alternatives, the MDIFW has subsequently addressed in the final ITP why these measures are not needed. As a result, the final EA takes a somewhat broader approach to defining alternatives that does not include a detailed suite of measures, other than those addressed in the MDIFW's final ITP. We address why these measures were not needed to meet the issuance criteria in the minimization section of this findings and in our response to comments in the final EA.

The Service concluded its NEPA review with a final EA and Finding of No Significant Impact (USFWS 2014b). The FONSI supports issuance of an incidental take permit to the MDIFW for the statewide fur trapping, PM, and ADC programs.

V. General Criteria and Disqualifying Factors – Analysis and Findings

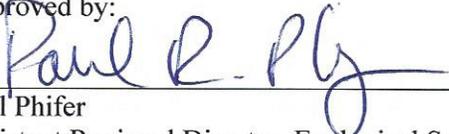
The Service currently has no evidence that would disqualify or make the applicant, the State of Maine, ineligible to receive a permit under our general permitting regulations in 50 CFR 13.21 (b through d), at this time.

VI. Recommendation on Permit Issuance

Based on our findings with respect to the MDIFW's incidental take permit application and the MDIFW's final ITP and supporting Service documents (including the final EA, FONSI, BO, and permit conditions), I have determined that the application meets the issuance criteria found in section 10(a)(2)(B) of the ESA.

I therefore recommend issuance of the section 10(a)(1)(B) incidental take permit (TE48539B-0) to the MDIFW for incidental take of Canada lynx from trapping activities in the State of Maine.

Approved by:



Paul Phifer

Assistant Regional Director, Ecological Services
Northeast Region

11/4/14
Date

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Appendix 1. ITP Key dates/chronology

- April, 2003 –MDIFW investigates incidental take options for both trapping and snaring with the Service. MDIFW decides to pursue a section 10 permit for snaring only.
- October 1, 2003 –MDIFW suspends their snaring program for the upcoming winter. MDIFW works on a draft HCP (Incidental Take Plan) for snaring.
- October 30, 2004 – Service meets with MDIFW to discuss snaring practices and potential risks to federally-listed species (lynx, eagles, wolves). MDIFW asks Service to review current snaring policy and proposed changes.
- December, 2003 –MDIFW submits first draft of an Incidental Take Plan (ITP) for snaring. Service provides comments.
- May, 2004 –MDIFW submits second draft of an ITP for snaring. Service provides comments.
- January-February, 2005 –MDIFW revises snaring policy closing some areas around known lynx occurrences. Reduced snaring in March. However, snaring was not resumed.
- June, 2005 –Service meets with MDIFW to resume discussion of snaring ITP. Service recommends that HCP should address both snaring and trapping.
- November 21, 2005 –Service meets with MDIFW to discuss snaring ITP.
- March, 2006 – Coyote snaring suspended for the third winter.
- May, 2006 –MDIFW begins to draft ITP for trapping programs (plan no longer covers snaring). A draft ITP was provided to Service for review.
- October 13, 2006 –Animal Protection Institute files suit against MDIFW concerning trapping practices that injure and sometimes kill listed species.
- October 16, 2006 –Service meets with MDIFW to discuss minimization and mitigation measures for the ITP.
- January 8, 2007 –Service meets with the MDIFW to discuss the number of eagles and lynx taken in traps in recent weeks, minimization measures in the second draft of the trapping ITP, and when MDIFW envisions submitting the final ITP.
- April, 2007 –MDIFW proposes new trapping regulations concerning exposed bait and leaning pole for killer-type traps in WMDs 1-11.
- May 15, 2007 –MDIFW completes draft ITP.
- June 22, 2007 –MDIFW completes application.
- July 5, 2007 – Service begins review of the ITP.
- Late July, 2007 – State Attorney General’s office meets with Service concerning the MDIFW’s ITP application.
- October 4, 2007 –MDIFW settles the suit with the Animal Protection Institute and Consent Decree initiated several new trapping regulations including trap size, cage traps, notification of take, etc. MDIFW is required to implement new trapping measures in the 2007 trapping season.
- October 15, 2007 –MDIFW meets with Service to discuss implications of the Consent Decree, letter concerning their ITP application, and next steps on the ITP.
- December 20, 2007 through May 27, 2008 –MDIFW revises draft ITP and submits sections to Service for review.
- May 27, 2008 –MDIFW submits an ITP and application for trapping. Service provides

comments to revise the ITP.

- August 13, 2008 –MDIFW submits a revised draft ITP.
- August 18, 2008 –MDIFW formally submits ITP and application which was forwarded to Service Regional Office (RO) for review on September 5, 2008.
- September, 2008 - Service meets with MDIFW to discuss issuance criteria.
- December 1, 2008 –MDIFW modifies trapping regulations to revise the leaning pole regulations.
- August to December, 2008 Service RO reviews MDIFW’s application. Service Field Office (FO) begins writing draft Environmental Assessment (DEA).
- February 5, 2009 - Service informs the MDIFW that ITP will be published in the Federal Register (FR).
- March 26, 2009 –Service provides formal notification to MDIFW that the application is complete.
- August 3, 2009 –Service begins review of DEA.
- August 6, 2009 –Service distributes MDIFW’s application and ITP for tribal review.
- January 8, 2010 –Service completes DEA and Notice of Availability and provides to MDIFW on February 26, 2010.
- June 17, 2010 –Service requests collaboration with MDIFW on trial of climbing ability of lynx using captive animals at the State’s Gray Wildlife Park.
- July 12, 2010 – Service meets with MDIFW concerning lynx trials at Gray Wildlife Park
- September 9, 2010 –Service informs MDIFW about the status of the ITP application and draft EA.
- December 14, 2010 –Service meets MDIFW to discuss MDIFW’s population viability analysis in the ITP.
- March 18, 2011 –Service provides MDIFW a copy of a DEA.
- March 29, 2011 –Service meets with MDIFW to discuss the DEA and next steps. Agreement to work on a joint outreach strategy and informational meetings.
- May 31, 2011 –MDIFW provides written comments on DEA.
- June 8, 2011 –Service meets with the MDIFW to discuss comments on the DEA.
- June 27, 2011 –Service completes DEA responding to MDIFW comments.
- July 20, 2011 –Service meets with the MDIFW to discuss edits to DEA, next steps, scope of the DEA, and outreach plan.
- August 18, 2011 – Service calls MDIFW to organize and finalize an outreach plan including informational/stakeholder meetings during the 90-day comment period.
- September 16, 2011 – Service meets with the MDIFW to review outreach plan.
- October 1, 2011 –MDIFW submits corrected draft ITP for inclusion in the Federal Register (FR) notice.
- October 6, 2011 –Service briefs MDIFW on results on lynx climbing trials.
- November 9, 2011 –Service publishes a Notice of Availability of a DEA and receipt of MDIFW incidental take permit application in the FR for a 60-day public comment period. Service also provided the August 13, 2008, draft ITP for public comment. Public information meetings scheduled December 13 at University of Maine at Presque Isle; December 14 at Black Bear Inn, Orono; and December 15 at University of Southern Maine in Gorham.

- December 1, 2011 –Service revises FR notice to clarify 90-day public comment period that ended on February 7, 2012.
- February 8, 2012 – Public comment period ends. Service received about 6,500 comments, about 6,100 of which were a mass email response.
- February 24, 2012. Service meets with MDIFW to discuss timeline and next steps for processing the application and the public comments.
- March 8, 2012 –Service provides MDIFW with a list of issues raised in public comments that required their input.
- March 13, 2012 –Service Region 3 reinitiates consultation with the Division of Management Authority on the incidental take of lynx associated with CITES bobcat hunting and trapping.
- March 16, 2012 –Service reviews all public comments and develops a summary table of substantive comments and shared with MDIFW.
- March 30, 2012 – Service completes review of draft ITP and public comments; recommendations made. Copies of summaries of public comments and recommendations for changes to the ITP were provided to MDIFW.
- April 30, 2012 – Service finishes initial draft of lynx climbing leaning pole trials. Shared with MDIFW.
- May 9, 2012 – Service provides MDIFW with an overview of recommended changes to the ITP and recommendations on minimization measures and mitigation.
- June 8, 2012 – Service meets with MDIFW to review some of the minor proposed changes to the ITP.
- June 18-19, 2012 –Service meets with MDIFW to review changes proposed for the draft ITP to meet issuance criteria.
- June 21, 2012 – Service meets with MDIFW to continue discussion of June 18-19. MDIFW indicates that Predator Management (PM) and cable restraints may be part of their new ITP.
- July 20, 2012 –Service distributes meeting minutes of July 18-19 meeting. MDIFW distributes new Canada Lynx Assessment.
- August 2, 2012 – Service meets with MDIFW to discuss project schedule, review action items and progress updates, and outline technical discussions needed as a result of the June 18-19 meeting. MDIFW begins discussion with Maine Bureau of Parks and Lands on possible mitigation opportunities on state lands. MDIFW proposes adding Animal Damage Control and PM programs to new ITP.
- August 13, 2012 –Service provides MDIFW with final lynx climbing report and sample videos summarizing trials.
- August 14, 2012 – Minutes of June 18-19 meeting finalized.
- August 17, 2012 –Service calls MDIFW to discuss progress. Service and the MDIFW develop timeline for completion of ITP.
- August 24, 2012 –MDIFW proposes changes in lynx exclusion device regulations (required for ground-set traps only) for upcoming trapping season.
- September 12, 2012 –Service calls MDIFW to discuss comments on minimization measures, how to address uncertainty and August 23, 2012, comments on minimization.
- September 24, 2012 –Service call with MDIFW to discuss adaptive management.
- October 25, 2012 –Service identifies issues for MDIFW to consider addressing through

adaptive management.

- December 5, 2012 –Service meets with MDIFW to explain adaptive management and how it should be used to address uncertainties associated with the ITP. MDIFW’s draft adaptive management sections reviewed.
- December 12, 2012 –Service calls MDIFW to discuss changed circumstance approach and adaptive management.
- December 17, 18, 2012 – Service calls MDIFW to follow up on items discussed on December 12, 2012. MDIFW provides mitigation proposal with Maine Bureau of Public Lands. Service provides recommendations on mitigation.
- February 4, 2013 – Service meets with the MDIFW in Augusta to discuss most recent draft ITP. February 7, 2014 –Service provides comments on most recent draft ITP.
- February 22, 2014 – Service calls MDIFW concerning project status.
- March 14, 2013 –MDIFW indicates they are including request for take of lynx in cable restraints in their latest draft ITP.
- March 18, 2013 –MDIFW delivers draft ITP to Service.
- April 9-10, 2013 – Service FO meets with Service RO to review ITP and develop response.
- April 25, 2013 –Service meets MDIFW to discuss remaining issues.
- May 14, 2013 – Service sends letter to MDIFW in follow-up to the April 25 meeting to clarify remaining issues.
- May 13, 15, 23, 24, June 3, 4, 12, 13, 14, 2014 – Service meets with MDIFW to revise ITP per agreements made at the April 25, 2013 meeting. Incorporated biologists and solicitors’ comments.
- July 31, 2013 –MDIFW delivers a final ITP to Service.
- November 7, 2013 –Service sends letter to Commissioner Woodcock acknowledging receipt of ITP and timeline for completing new draft EA.
- April 7, 2014 – Service FO completes revised DEA.
- May 7, 2014 – Service FO completed second draft of revised DEA based on comments from Service RO.
- May 22, 2014 – Service FO completes first draft of response to 2011-2012 public comments.
- June 3, 2014 – Service drafts documents for FR.
- June 11, 2014 –MDIFW provides memo on methods of calculating incidental take.
- June 16, 2014 –Service provides DEA to MDIFW for review before sending to FR.
- June 30, 2014 –MDIFW provides the Service with an updated section 10 application.
- July 3, 2014 – Solicitor reviews DEA.
- July 29, 2014 –MDIFW submits a revised draft ITP that included new trapping programs (i.e., predator management and animal damage control), new forms of trapping (e.g., cable restraints, cage traps), and changes to its trapping program (e.g., rescind the 2007 consent decree to allow unlimited trap foothold trap size).
- August 4, 2014 –MDIFW submits updated application for 10(a)1(B) permit that formalized submission of the July 29, 2014 version of the ITP and reflected updated program contact information.
- August 6, 2014 –Service publishes a Notice of Availability for a 30-day supplemental public comment period of the both a revised DEA and revised ITP in the FR. Comment

period to end September 5, 2014.

- August 7, 2014 –Service develops memorandum for the MDIFW concerning mitigation needs in ITP.
- August 19-20, 2014 –Service meets MDIFW to discuss a number of issues for clarification in the July, 2014 version of the draft ITP, especially mitigation, changed circumstances, and funding.
- October 28, 2014 –MDIFW submits the final ITP to the Service.